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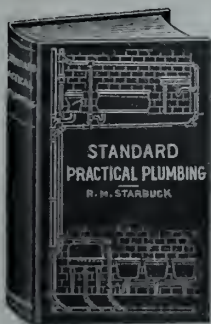
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TORONTO, JANUARY 2, 1911

TOO MUCH PRICE CUTTING.

It is impossible to minimize the extent to which price cutting is indulged in by the plumbing trade. In no matter what centre of work one goes there is always the same cry "too much price cutting." It is met with in the large city, and it is met with in the little community that is only large enough to hold two plumbers. It is this senseless price-cutting that is so largely responsible for the many failures that mark the plumbing trade; it is responsible for the many evidences of shoddy work that is from time to time exposed; it is responsible for a large majority of the knocks that are directed against the trade. Ask any plumber what influence is most working against his success, and he will say price-cutting.

How can this price-cutting be suppressed? Probably never, but it can be kept within such a limit that its injurious effects compared with the evil now, would be as an April shower to an inundation. How can this be brought about. Only by the individual effort of each plumber.

First of all there is organization. Right in their hands the plumbers of Canada have a means to grapple with the evil of price-cutting. It can wield the trade into a homogeneous whole, it can solidify the position of the reputable Master Plumber, it can present the facts of the case so clearly to the public that the public will discriminate between cheap and fair price work, and it can also educate its members to the value of maintaining price, and show the folly of undercutting. It is in a position to educate the plumber into a business man. But every member must be loyal to the association, and being loyal to the association is merely being loyal to himself.

Many a man cuts prices because he really believes that his price is sufficient to give him enough profit. He probably forgets all about his overhead expenses, he forgets the fact that may be raw material had gone up since he bought his last consignment, he forgets that he is now paying somebody to look after his telephone. All these things are not calculated in the percentage allowed for profit, and he is surprised to find at the end of the year, that instead of a profit he has met with a loss. Make all plumbers business men and there will not be so much disposition to cut prices.

Then there is the exercising of good common sense. Competition is keen and many a young plumber anxious to clinch a job because he is scared as to getting work for his shop sends in a cut rate, thinking may be that later on he will raise his price for other work. But what is the good of that job to him? He is not any nearer paying his way. How can he live if his profit has

gone. The time spent on the job is so much wasted—for he could have spent the time more profitably in looking for work that would prove remunerative. Competition does not meet a man on every job that offers. Then again by doing this cheap work he has put himself down as a cheap man, and has lowered the scale of work in the district generally. Once a plumber starts to cut people expect him to continue to do so, and if he objects to this they will take the work elsewhere. Who has not heard the remark, not only applied in the case of the plumber, but to others in a similar box. "If I want anything done cheaply I go to Mr. Black, but if I want the job done well I go to Mr. Brown and pay his price." The first man may do the work just as well, probably better, but his price is cut, and the public is suspicious of the man who cuts.

As we have pointed out before every plumber should do his utmost to keep up the scale of prices in his district. There is no difficulty in getting a fair price if every man stands out for it. Work may be longer in coming to the young plumber but when it does come it will be profitable. It must not be forgotten that a man working on a fair profit and doing half the work of a man who is cutting, will have the more money at the end of the year. If a plumber is true to himself, true to his fellow master plumbers, associates himself strongly with the objects and aims of his association, and educates himself to become a business man; price cutting will get a knockout blow.

FILTRATION OF WATER SUPPLIES.

The quality of water for human consumption depends upon the polluting and purifying influences to which it has been subjected before reaching the consumer. It is well known that the general health of a community using a sewage polluted water gradually falls lower and lower and the death rate increases proportionately. Of the diseases most frequently following the use of an impure water, typhoid fever holds, at the present day, the most prominent position in the public eye. It is a curious fact, as yet unexplained, that the change from an impure water to a pure supply diminishes the sickness and death rate, not only from typhoid fever, but also from tuberculosis, pneumonia, and other serious diseases. It is also a fact that in certain cities using a sewage polluted water the death rate from typhoid fever is many times more than that for cities using a filtered water supply taken from the same source.

Generally speaking, there are two methods in use for the filtration of public water supplies: they are known

as the "Slow Sand" filtration and "Mechanical" filtration. In the former type, the water filters through beds of sand and gravel at varying rates of from two to five million gallons per acre every twenty-four hours, according to the character of the water. In mechanical filtration, a precipitate is first added to the water, which is then passed through a medium of sand under pressure, the rate of filtration being many times more than in the slow sand filters.

The type of filter best suited for any particular water must be carefully considered before adoption by a municipality, and this can only be done by a competent sanitary engineer. When either system can be used, it resolves itself into a question of primary cost and annual maintenance. The slow sand filters cost, approximately, \$30,000 per million gallons of the daily consumption and about ten per cent. of this per annum for operating; while a mechanical filter costs about one-fourth, and, if carefully operated, a high degree of efficiency as regards purification can be obtained. This is well exemplified at Chatham, Ontario, where for some years filters of this latter class have been in operation, the water treated being that of the river Thames.

TECHNICAL EDUCATION.

That technical education for plumbers would be a wonderful boon to the trade is fast becoming recognized. Opinion seems to be setting rapidly in that direction. At the second annual banquet of the Calgary Association of Sanitary and Heating Engineers, the matter was taken up, while recently the plumbers' union of Hamilton urged upon the board of education the establishment of classes for plumbers in that city.

Sanitation has become one of the prime necessities of the age.

The plumber, or sanitary engineer, as he should be called, is engaged in a work of extreme importance from the standpoint of public health. That he should know his work thoroughly is essential, and it follows that the benefits of technical education in plumbing work would be reaped by the public, as well as by the trade. Improve the standard of work done and the general public will gain just as much as the members of the craft. If all young men, who decide to become plumbers, were to begin work with the knowledge of the trade that a technical course would give, they would more quickly acquire the practical side and become in the end much better workmen.

It would be a wise plan for all places of sufficient size to establish night classes as well. All members of the trade could benefit by attending classes of instruction and the status would be materially raised by this means.

IMPROVING THE TRADE STATUS.

Old Country plumbers are very successfully striving to raise their status and educate the public to regard the trade as a scientific one, which has as its object the improvement of sanitary conditions. The Institute of Plumbers has done splendid work along this line, and is aiming at even greater things. At the half-yearly meeting of the Institute, held this year at Leeds, Eng., President J. P. Cox stated that formerly plumbers were depicted in a false light by the comic papers and other journals, the tendency being to regard them as the fixers of extremely high prices. To-day, however, this erroneous impression is being slowly corrected. The trade was striving to benefit the health of the community and was winning

recognition on that score. Members have been enrolled in all parts of the Empire, even in South Africa and Calcutta. The president added that, when a plumber obtained a certificate from the Institute, it would be accepted as an evidence of his efficiency in all British possessions.

The Institute is devoting half its funds to educating young plumbers, not only in the best methods of work, but in business principles. This policy should very materially affect the future of the trade, as it will raise the standard in many essential respects. The Institute undoubtedly is doing splendid work along these lines, setting an example well worth following.

OFFICIAL NEWS

N. A. M. P. & S. F. of CANADA

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Chairmen of Committees:—Legislative, H. A. Knox, Ottawa; Sanitary, Geo. Ross, Brockville; Apprenticeship, Jas. Griffin, Montreal; Essay, J. E. Farrell, North Bay.

Next National Convention will be held at Port Arthur and Fort William about June 1, 1911.

A GOOD YEAR'S WORK DONE.

The Master Plumbers' Association of Toronto has completed its first year and is entering on the new term with every confidence. It is felt that the future holds forth the prospect of even greater benefits for the members.

Despite the contentions of certain parties to the contrary, it is an established fact that the association has been of value to every member who has attended the meetings with any degree of regularity. They have got into closer relationship with fellow members of the craft, have given and received advice, have extended and solicited assistance. More tangible benefits have been received, however. The appointment of a supervisor of plumbing inspectors was partially brought about by the continuous agitation of the officers and members of the association. The Ways and Means Committee have gone into trade problems and have presented valuable reports on the question of price-cutting, which should do much to convince the craft of the folly of pursuing that course. Other reforms are in sight, which can be traced directly to the persistent work of the members of the association.

A review of the first year's work leads to the conclusion that the amount done has been quite as good as could have been expected. If the same energy is displayed in the future, the association will constitute itself a potent force for the improvement of the status of the craft and the amelioration of existing evils.

President Cooper and Secretary Legrow are working out an advertising idea designed to increase the membership in the National Association of Master Plumbers. It promises to be a "hummer" and should certainly result in bringing new members in all parts of the Dominion into the fold.

PUBLIC CONVENIENCES.

The revival in the Montreal City Council of the question of the imperative need of a public lavatory for the city brings out the wider point that Canada as a whole is still away behind in the number of these conveniences. From time to time The Plumber and Steamfitter has discussed the question and urged the plumbers of the country to continue to agitate until such a wave of reform sweeps our various authorities that the absence of a public convenience in a community of any size will become the exception and not, as now, the rule.

Progress has been made. Since our last campaign many conveniences have been erected or are being contemplated, but there is much more to be done. In all agitations for reforms which are vital and yet not of the showy kind there is a general disposition to allow things to slide. Public opinion may be hot foot after an alleviation, and then something more spectacular comes along and the matter is dropped. It is up to the plumbers of the country to see that the question of public conveniences is not allowed to sink into oblivion. It is true that some scoffers may say that in this the plumbers have an axe to grind, but the latter are strong enough to stand such sneers. They are not the only people who have had stones thrown at them while engaged in working for the public weal.

The plumber is the best fitted man to keep the agitation moving. He has the weight of authority behind him when he tackles the question of a public convenience. The great obstacle is the well worn cry of no money for the purpose. It has always been this in Montreal. "We know that public conveniences are wanted," say the city fathers, "but unfortunately we have no money. The matter has been submitted to experts and they say that such a convenience will cost more money than we can spend." Very often an absurd price is put forward, a price that a plumber knows is beyond all reason, but the public generally is not so well informed, and so they submit to the plea of no money now, but may be there will be some another time.

The plumber with his knowledge can come forward and say if the estimates submitted are all wrong, he can tell how the convenience should be equipped; he can act as a guide and mentor to members of an authority who are believers in reform in this direction. He can put the whole weight of his experience and knowledge behind his talking points, and the enlightened public will follow.

It is a crying shame that Canada should be so destitute of these conveniences. There is danger to health; there is danger to the public morality in their absence. Why should the citizens of any community be dependent upon the sufferances of the stores and other business premises, ay and even of the saloons. And if it is bad enough for the citizens who know where to go, how about visitors who are not so well informed? They cannot stay in their hotels all day. What are they to do?

The more the question is looked into the more serious it gets. From all points of view the question of public conveniences is one that should be the first plank of any civic propaganda instead of being the last, or being ignored altogether. Private facilities are not so common as they were. The big business premises no longer keep their lavatories open. They find that the comfort of the tenants must be considered first and that general public usage induces a congestion. The doors, therefore, are being locked. They cannot be blamed for this, but it reduces the facilities to the departmental

stores and the saloons. Soon the departmental stores will follow suit except to customers who can show a purchase, and then the saloons alone will be left. But the saloons will not close their doors. The whole world deplores the temptations of the saloons, but the authorities of Canada by shutting their eyes to the need of public conveniences are driving victims into the very places they condemn.

Let us be up and doing. Let every plumber work hard for an alleviation of this grievance, and show detractors that he can institute a great reform even though he is the butt for many ill-timed jokes. The article in this issue describing what "Busy Berlin" has done during the past year should be an inspiration to master plumbers in other Canadian cities to have their home city do likewise.

PERTINENT QUESTIONS.

A letter which John Watson, secretary of the Montreal Master Plumbers' Association, and a former hard working president of the National Association, recently sent out to the members requesting their presence at a meeting, is worth the highest praise. It would be hard to find a better example of zeal, of effective campaigning, and of opportunism. We commend it to the perusal of all association officials.

After giving the agenda of the meeting Mr. Watson proceeded to have a little forcible talk with each man on the value of associated work as follows:

"Belonging to our Association broadens the views on all subjects discussed, such as plumbing, heating and ventilation, etc.

"The assistance one member gives to another often times cannot be estimated.

"Loyalty to the Association is its main stay and is the first duty of every member. If we can only secure loyalty it will lighten the burden of your officers and build up the Association. I would suggest a few questions for self examination.

"1. What have you done to advance the influence of the Association?

"2. How many meetings have you attended in two years?

"3. How many times have you knocked the Association?

"4. What amount have you paid for its maintenance? Then estimate the advantages received.

"We ask for two hours of your time to attend one meeting per month from four to six o'clock, if this is not a suitable hour for you, ask the Association to change it.

"We wish to make the association of use to you and every member, and we cannot do this without your assistance. Are you willing to do your share? If so attend our next meeting, and boost the good work along.

"I can guarantee profitable returns for those two hours per month spent with association members."

Is not this valuable secretarial work? Does it not make a man sit down and think? Good plain speaking, Mr. Watson, and we congratulate you. It is knocking the nail on the head with a vengeance.

Calgary Association Holds Annual Banquet

Sanitary and Heating Engineers to the Number of One Hundred Assemble Around Festive Board—Work of Association Highly Praised—Technical Education for Plumbers is Recommended Strongly by Speakers.

Calgary, December 17th, 1910.—The Calgary Association of Sanitary and Heating Engineers held their second annual banquet at the Grand Union Hotel, Calgary, on Thursday, December 15th, and the occasion was the signal for an evening of jollity, entertainment and good fellowship. About one hundred guests sat down to tables that fairly groaned beneath the weight of good things, awaiting the masticatory efforts of the guests. After the delicacies had been disposed of in a very workmanlike and satisfactory manner, the President of the Association, James Marr, who acted as toast-master, proceeded with the toast list, which was a rather lengthy one, beginning with "His Majesty, The King," and ending with "The Ladies;" eleven toasts in all.

Replying to "Our City and Corporation," J. W. Mitchell, Mayor-elect, thanked the Association for their kind reception of himself; this being his first official appearance since his election.

He extended a hearty welcome to the outside visitors and after touching on the general growth of Calgary, turned to the question of the Association work, which he expressed himself as being thoroughly in sympathy with. Calling attention to the phenomenal growth of the city, the building permits for the year 1910 reaching, if not exceeding, the six million mark, he emphasized the necessity of this enormous expansion being carried on in a first-class manner, so that in future ages Calgary would always remain in the forefront as an example of excellence in the different branches of the building trades. There is no room for doubt, and the civic authorities all over the world are recognizing, that of all the trades and professions interested in the up-building of a great city, there is none that ranks so high in importance to the community at large as that of the Sanitary Engineer, and the Heating Expert; the first, because he prevents disease, and the second, because he has reduced his profession to not only a science in the matter of comfort, but also enters the field of sanitation in the way of proper ventilation, which means a lot to future generations, by providing a pure and wholesome atmosphere for them to live in. He was proud to say that Calgary stood in the very front rank in regard to sanitary regulations, workmanship, and appliances; and the credit for all this was due solely to the Calgary Associ-

ation of Sanitary and Heating Engineers. men whose training in the field of sanitation made them fearless in bringing matters that would work out for the bettering of conditions in their line of civic growth, before the proper authorities. He emphasized the fact that even a city father can not know everything, and for his part he was only too glad when men, who are experts in their particular line, called his attention to important matters relating to that line, as he always felt that they knew what they were talking about and that any suggestion from them was based on sound and practical basic principles. As an instance of this, he congratulated the Association on getting the by-law passed that called for the rigid examination of both masters and men in the plumbing trade. "You need only to look around Calgary," he said; "and after comparing the class of work done before this by-law was enforced, with that done since, to know that the objects attained by this enforcement have been equal to the highest expectations."

At the conclusion of Mr. Mitchell's address, J. E. Williams rendered a solo in a pleasing and artistic manner, and then

President Marr responded by telling how the name of the Association had been changed. It was through a flirtation between the plumbers and steamfitters of Calgary, the love affair ending in a marriage. He wanted all present to consider themselves as Godfathers of the young association and give it every help. He made a plea for a better class of goods. "I have a special word for the supply men," he said. "When you pack your grip to come west, see that only the very best samples of goods are put in. If, on the way up, you think that you have something not just as good as it might be, drop it into Lake Superior—for Calgary wants only the very best."

He spoke of the good results which the association had achieved. Much credit belonged also to the Health Committee, the Examining Board, Mr. Good, of the Wm. Head Co., Mr. Bewick, of the local journeymen's association, plumbing inspector Fletcher and to the workmen.

For Technical Education.

"The time has passed when all a youth needed to fit him for the battle was to serve his time with a journeyman, learning from him all that he could teach him, and start off as a journeyman himself, knowing just what it pleased his superior to teach him," said the president. "What we need to-day is technical training for our youths and men, so that they can meet and overcome any problem that they may be forced to meet in their work. By



Calgary Master Plumbers at their Second Annual Banquet.

J. J. O'Gara, one of Calgary's leading architects rose and asked permission of the guests assembled to propose the toast of "Our Hosts," accompanying the proposal with a neat speech in which he called attention to the fact that the Association, as a body, had been the means to a great extent of introducing fellowship into the building trades branch of this work-a-day world, culminating in the present banquet. The guests responded with three rousing cheers, and the toast was honored with great enthusiasm.

all means let us have technical schools and instructors, if such a thing is at all possible.

"We will then be in a fair way to lift our profession to a height that was undreamt of by our forefathers in the plumbing and heating line."

Settlers Needed.

E. Dagg, Vice-President of the Calgary Board of Trade, responded to the Board of Trade toast, and predicted a great future for Calgary, especially calling attention to the large number of new

settlers, both in and around the city, and the need of all the trade associations, boards, and societies, joining together in a band of brotherhood for the advancement of the city's interests.

In calling for the toast of "Our Sister Associations," the President coupled it with the names of Ald. R. A. Brocklebank, President of The Calgary Builders' Exchange; E. J. Young, Vice-President of the Calgary Association of Sanitary and Heating Engineers and also Alberta Vice-President of the National Association of Plumbers and Steamfitters and S. M. Morton, Vice-President of The Edmonton Master Plumbers Association.

Ald. Brocklebank called attention to the fact that a good movement once started, will have very far reaching effects, citing the fact of the success of the Plumbing and Heating Association emboldening other branches of the building trades to organize in Calgary. The Builders Exchange, which had been defunct for several years, had been re-organized, and the Painters and Electrical contractors had also organized associations, each one of which was working very satisfactorily, the electrical contractors especially taking pattern off the plumbers by endeavoring to secure an examination for intending masters and journeymen in their line, a movement which is practically assured of a successful issue.

Told of the Work Done.

E. J. Young, who spoke in his capacity of Provincial Vice-President for the National Association, gave a general outline of the Association work throughout the Dominion and emphasized the necessity of associations being formed in all the cities and towns in Canada, but very especially in the West, where the bald prairie of one day may be the great Metropolis of the next.

Rising to reply to the toast, Mr. Morton created a gale of laughter by calling the chairman "Father." While he quite appreciated the great future in store for Calgary, (and he considered the Calgary Association of Sanitary and Heating Engineers should be in the very forefront in making that future a glorious one) still he could not agree with the claim that Calgary was "it" entirely, as he represented a City in the north that would take second place to none.

Of course this was natural patriotism, and it was a poor man that did not believe his own city the best, but the West was large enough and broad enough to support two cities without petty jealousies spoiling the good feeling that has always existed between Calgary and Edmonton. He was glad to be able to say that the Edmonton Association was as successful in its way as the Calgary, and

while a younger body, was in a fair way to be a credit to its parent. He took umbrage at the quotation which accompanied the "Sister Association" toast. This quotation which read "They brought one Pinch, a hungry, lean-faced villian, a mere anatomy" was a distinct slur upon the ability of Edmonton to feed its citizens and he thereby called upon his colleague, Mr. Lockerbie, "The Honest Plumber," to rise and refute the insinuation of being a "hungry, lean-faced villian," by showing that if he was a "mere anatomy" he was certainly a very substantial one.

High-Class Work Done.

E. N. Butler, of the firm of Hodgson, Bates & Butler, responded to the toast "The Architects." He was more than pleased to see that Calgary contained such a body of progressive and up-to-date business men, especially in the building trades, this being a line that touched both himself and his colleagues closely. He had had a very large and comprehensive experience both in Canada and in the Old Country, in building, and he could say with all truth, that the class of work done by the members of the Calgary Association of Sanitary and Heating Engineers, was of a much higher quality than that done in most other places, and certainly was inferior to none.

What Supply Men Have Done.

Mr. Fulton, Winnipeg manager for the Dominion Radiator Co., spoke in reply to the "Manufacturers and Supply House" toast. He said that by manufacturing and marketing high-grade sanitary and heating fixtures at prices that placed them within the reach of the general public, the manufacturer and supply men had done much to raise the standard of comfort and sanitation throughout the country. It rested with the master to see that these articles were installed properly, and the natural result would be a better idea of living in general by the people.

P. D. McLaren, Calgary manager of the Canadian Fairbanks Co., also responded to this toast, heartily endorsing the remarks of Mr. Fulton. He claimed that he had a closer feeling toward the Association than most, as he himself, was a journeyman plumber, graduating into a master, before going into the supply business.

J. T. Child, City Engineer, and E. P. Fletcher, Plumbing Inspector, replied to "The Engineering and Health Departments." Both of them endorsed the stand taken by the Association for a better class of work, and agreed that the solution for the future in the plumbing and heating trades lay in technical education.

Chas Purchase, President of the Local Union, responded to the "Journeymen Plumbers and Steamfitters" toast, and said that never in the history of the Local Union had there been so much hearty co-operation and good will between the masters and the men as since the formation of the Association. He also remarked that the journeymen were as anxious as the masters to have technical education and at a recent meeting a report was sent to the Trades and Labor Council, endorsing the establishment of schools for this purpose.

J. Lewellyn Wilson, of Rees & Wilson, Architects, responded in a very happy manner to "The Ladies" and the banquet broke up with the guests singing "Auld Lang Syne."

A PLUMBERS' OUTING.

A party of Regina plumbers, of the firm of Vogg, Wilson & Co., took a half holiday recently and visited the home of T. Lewis, the president of the local



Western Plumbers Appearing in a New Role.

union. A splendid afternoon's fun resulted, the feature of the programme being the able manner in which the party assisted in the killing of a pig for the host. After a substantial supper, music occupied the time of the party for some hours, a very enjoyable evening being spent.

The Bownass Hardware and Plumbing Co., Victoria, B.C., are advertising—"Although burnt out we are still in business. Orders left at the Canadian-American Realty Co., 1204 Douglas St., will be promptly attended to." This is evidence of an enterprising spirit.

M. J. Quinn, of the National Equipment Co., delivered an address before the members of the Toronto Union of plumbers, steam and gasfitters, on "Rural Water Supply and Sewage Disposal," on Friday night, December 9. The meeting was open and there was a good attendance. Mr. Quinn's address was illustrated with charts. At the conclusion he answered a number of questions propounded by his hearers.



The Plumbing Business

As long as the plumber clings to his traps, tubs, pipes and wrenches with a mind rising no higher than the mechanical details of his trade, he will be merely a "plumber." This series of articles will deal more particularly with the business end and readers should derive benefit from reading them

Written for the Plumber and Steamfitter by Charles H. Denison.

CHAPTER XI.

There is a little bunch of matter weighing but a very few ounces, that is located in a hollow box of bone and attached to the topmost end of the body of man. We call it the brain, and it is supposed, generally, to rather govern the beings to whom it is "hooked up."

If the apparatus works under normal conditions all may be well, but if the safety valve happens to get stuck or the weight too light, something is liable to explode. A man's business will, pretty nearly every time, show up the general condition of his mind. You see a dirty, sloppy-looking, gloomy store or shop that fairly gives you the "creeps" when you enter, and you will find that the main mind that controls that place of business is in a similar condition to the shop.

How could it be different? If the boss were so inclined, couldn't he mighty soon "make a cleaning" in that store or shop? You bet he could, but has the idea ever struck him that he would do well to clean up mentally?

A narrow-minded, contracted, tighter than the bark to a hickory tree, opinionated character will never make a success at the plumber's business. That there are many who answer to this description and are still in the business, I do not dispute, but the amount that they get out of the business may well be compared, in bulk, to the "widow's mite."

May They Become Fewer.

May their numbers grow less and their brains increase, both as to the amount and its character! I have always "stood pat" on the idea that a man could make about anything out of himself, in this life that he might desire, and it will take a great deal of "showing" to convince me to the contrary. At the present time I am not aware of any special dispensers who are going around handing out brains or supplying desires. Consequently, it would rather seem that it was distinctly up to the plumber to do this brain work for himself.

A little-minded man, with no desires in this life (but to get what was coming to him from day to day), never yet ran a big business, or shaped the policy of a party or bettered the condition of the

human race; nor will such an event occur in the future.

Uneducated men have, at various occasions in the world's history, accomplished seeming impossibilities; yet we find that, in most cases when these men have gotten up in the world, they attempt to acquire more or less information from instructors, as they have the time to devote to the effort, and nearly every individual of the class just mentioned will admit that he (or she) would have been better for a certain amount of training that they failed to acquire.

More Brains Needed.

To my mind, the extensive betterment of the plumbing business along broader and more advanced lines than it is, or has been, exists not in passing folio after folio of laws that may never be enforced, or, perhaps, enforced indifferently, or only in the interests of certain firms or individuals, but in giving or showing the plumber how to acquire a new brain. You start out, then, with an entirely different order of things from the very foundation.

That would clarify the whole situation to an amazing degree. **We would then see fewer fool ordinances; but better men.** Do not understand that I am strictly against ordinances. I am not, but I do object to those which are out of date or constructed for favorites. We plumbers have been accused of many different things, but I have seldom heard it said that we were crowded with brain power. Now, I would not talk in that fashion if I had not been a plumber and also in the business, for I am not favorable to the idea of any persons assuming to know matters of which they are ignorant, or which they repeat after the fashion of a parrot. If there are any good thoughts in this series of articles they are the result of experience and study.

So I claim the right to talk about my own "kin folks," as it were, and if I give them Hades, sometimes, it is because that I know that they deserve the same.

Do you catch on to that word "study" just mentioned? If you ever are to improve in this world, that is the very thing that you have got to do. Do it as a helper, as a journeyman, as a master,

and, finally, as a broad-minded citizen of the world at large.

When you study for a couple of years or more on various matters connected directly with the business, you will be surprised most mightily, on looking back, to realize how really ignorant you must have been at that time. This is one of the greatest "eye-openers" that can happen, and a lesson that is worth much to any man. Suppose that ten thousand plumbers started to-day to acquire knowledge along the lines that I have talked about. Suppose, again, that six or eight thousand of those who started succeeded in the attempt.

Can you figure out the benefit that such a circumstance would have upon the whole country? Upon the business itself? Upon the people at large, the manufacturer, and lastly, where would it place the masters themselves?

If you limit the scope of your mind to tubs and traps, you will have a tub and a trap mind. Nothing surer. It will be the burden of your conversation. Now, while that may be all well enough, so far as it goes, it certainly does not go far enough to-day. We have immense systems nowadays, where we had only a few cesspools years ago. Have you grown according to the advancement, or **are you still only a cesspool plumber?**

Ask yourself that question and it will not take more than three jerks of a lamb's tail for you to find out just where you are at. Should you wake up to the fact that you are in the undesirable class alluded to, it will be your own fault if you remain there. Separate yourself from the things that have been keeping you from becoming what you should. This applies to everybody all along the line, and the lesson, while severe, will certainly be most effective.

You may then begin to get in line and become an ideal master in an ideal shop.

Where would I find such a place? Why, I should expect to find it in some city of about three hundred thousand, or less, in population; where the man was not so tied down but what he could get out of town, if he choose.

I would expect such a man to be a "comer" and to be extremely liberal-minded, and that, in due time, he would make his mark in the business.

Plumbers Should Carry Bathroom Accessories

Cabinets, Towel Racks, Soap Trays and Glass Holders are Among the Lines That Will Prove Profitable — How They Can be Effectively Displayed.

The tendency of every trade to-day is to branch out, to include within its scope such of the new lines that are constantly coming forward as may be reasonably and conveniently handled. Perhaps the least wideawake in this respect is the plumber. While some are keen to recognize opportunities for trade expansion, the majority seem to be quite content to go along on the old lines. It is time that this take-things-easy attitude was discarded and a more progressive policy adopted.

The sales manager of a stove manufacturing concern was considerably nonplussed recently by an order from headquarters to reduce the expense of his department by 5 per cent. He went carefully into every source of outlay and could not see how he could possibly effect the required retrenchment without reducing the efficiency of his staff of traveling salesmen—a course he was very loth to adopt. Finally, it occurred to him that by taking up a line of heating and cooking accessories for the travelers to handle, he could make a profit out of them to be applied to the road expenses. The idea was tried out and proved successful, the profits more than providing the 5 per cent. desired.

Many a plumber finds that his "overhead expenses" are too heavy in proportion to the revenue of the business. He may find it inadvisable, however, to look for cheaper quarters or in other ways to scrimp on the upkeep of his establishment. Under such circumstances he might well take a leaf from the book of the stove salesman referred to above and find the remedy by taking up a new line.

Carry Bathroom Supplies.

There are a great variety of lines which could be carried in connection with the plumbers' business. When a householder puts in a bathroom, he does not stop at the plumbing. There are other things to be secured before the room is complete—a wall mirror, rubber tile for the floors, a medicine cabinet, towel racks, soap trays, tooth brush holders, glass holders and a cabinet for the storing of linen. The up-to-date plumber handles these lines and supplies them in nine cases out of ten where he gets the plumbing contract.

Those who have not up to the present handled any such fixtures and accessories, would find it a paying venture. The idea is, at any rate, worth careful consideration.

It Would Pay Well.

The handling of these goods would add not one cent to the overhead expenses. No more room would be required in the store and the work involved would be nominal. On the other hand, there would be a fair profit on all goods sold, which would be over and above the profit made on the plumbing work.

Another advantage is the opportunity presented to improve the appearance of the store. A plumbing shop containing a few sample bath tubs, sinks, etc., looks bare and uninviting. When a supply of fittings and accessories is added, it is possible to utilize the walls and windows for their display and the effect is good.

The show room of Barr & Anderson, Vancouver, illustrations of which appeared in *Plumber and Steamfitter*, November 15, contains a liberal display of small bathroom goods. Against one wall is a large and very handsome cabinet, containing a variety of nickel towel racks, tooth brush holders, soap trays, etc., while space on each side is used for larger articles of the same description. The other wall is used to display a variety of wall mirrors, ranging from the smallest to ones of extreme size. Small cabinets for linen, medicine, bottles, etc., are also shown. The effect is good, the stock having a more complete look. No property owner could visit the store and select a bath-tub without securing the necessary accessories from that firm.

The plumber who does not carry these goods voluntarily passes by the opportunity for a profitable trade. His customers will go elsewhere for the articles needed to complete their bathrooms—possibly to some other plumber. If they have occasion again for plumbing work, there is the possibility that they may go to the firm which carries, to their knowledge, the more complete stock.

Made a Clear Profit.

"It is now eighteen months since I took over bathrooms accessories," said a Toronto plumber, the other day. "I really cannot understand now how it was that I did not take them up long ago. They are just as surely a part of the plumber's trade as caps and hats are to the dealer in men's clothing."

"I make a neat profit on these goods but I do not allow myself to fall into the mistake a friend of mine made. He applied what he made on to his overhead expenses and found that they were materially reduced. From that he figured he was now working under less ex-

pense and could afford to cut his prices a little closer. The result was that he handed the profits on to the public and kept for himself just the work of handling and selling the goods.

"I treat matters differently. I allow a small proportion of overhead expenses to be borne by the sale of fixtures and the balance I figure to make up on my plumbing contracts—the only sane way of doing business."

Can Get Cabinets.

Certain manufacturers will supply cabinets gratuitously with orders for a certain quantity of goods. It is possible therefore, to start in these lines with no expenses other than the cost of the initial stock. The cost would not be heavy and would be soon met as it should be possible to turn over stock of this description very quickly. Only a limited stock need to be carried, as new material can be obtained at very short notice.

NEW CLOSET FIXTURE.

The Ideal Manufacturing Co., Detroit, have brought out within the last year, a closet fixture for use in public buildings, school houses, factories, basements, garages and all places where a clean and indestructible fixture is needed. The main feature of the new outfit is that it is indestructible. The tank is of cast iron galvanized and the seat is made



New Closet Fixtures of Ideal Mfg. Co., Detroit.

of 1½-inch stock, boiled in a special preparation of linseed and paraffine oils, which renders it waterproof.

The idea has been taken up by architects and plumbers and there has been a good demand for the new fixture. There are 400 in use in the Packard Motor Car Co. works in Detroit.

Relative Efficiency of Different Types of Radiators

Paper Read by Herbert Orr, Cleveland, Ohio, at the Second Annual Meeting of the National District Heating Association—Powers of Resistance to Corrosion Discussed.

Notwithstanding the obvious advantages of sheet-metal radiation in the way of reduced weight, reduced space occupied, facility of handling, and ability to withstand, without injury, the freezing of contained water, there prevails in some quarters the general impression that this new form of radiation also possesses inherent defects which render it unworthy of consideration as a substitute for cast-iron radiation. This impression is due, perhaps, in no small measure to the adroitly conducted "Campaign of Discouragement" that has been directed against this new thing—as comprehensive and systematic a campaign as was ever directed against any innovation, the advent of which threatened the commercial supremacy of the interests occupying a chosen field.

Such opposition and obstacles are not unusual. It was so with the railroad, with the automatic harvester, with the telegraph, the telephone, etc. It was so with steel itself. Benjamin Huntsman, the inventor of the process that produced the world's steel up to the invention of Henry Bessemer, found difficulty in introducing his product in his own country, owing to the conservatism of the Sheffield entlers, who "nerversely declined to work a metal so much harder and denser than any to which they had been accustomed, so that he was compelled to introduce his product, which was destined to revolutionize steel-making, through a foreign market."

Opposition Proved Futile.

But, as in the case of those great inventions, it is also to be expected that the hindrances put in the way of the new form of radiation will be ineffective in the end; since anything of the kind of genuine merit, if properly exploited, cannot long be prevented in this age of progress from coming to its own. Now that this particular new thing has survived the vicissitudes of the experimental stage, and has entered upon a career of commercial success, it may prove advantageous to point out the fallacy of some of the arguments advanced against it. A permanent record of the discussion of the subject may also be of value for future reference.

The durability and efficiency of the new form of radiation have been assailed particularly. Dire predictions have been made as to the short life of the thin steel walls of the pressed radiation as compared to the thick walls of the cast-iron type. Ominous comparisons

have issued, of which, perhaps, the one most often heard is that likening the pressed radiator to the steel kitchen-boiler, which has proved to be comparatively short lived. Finally, on the subject of efficiency, ignoring the more than compensating virtue of a thin metal wall versus a thick one, capital has been made out of the theory that steel has a slightly lower radiating power than iron.

If we are going to discuss the vulnerability of steel to the corrosive impurities of water in radiating systems, one has but to refer to the steel nipples connecting the sections of the cast-iron radiators, which are located in the direct path of all circulation to call to attention that the cast-iron chain is no stronger at the point of its weakest link, than steel. The screw-nipple used between sections of cast-iron radiators is of much smaller cross-section, especially after threading, than the 20-gage (16-gage after galvanizing) steel radiator. As for push-nipples, these as regards durability are about on a par with the walls of pressed radiators, except that the many that have come under the writer's observation were either not galvanized at all or the galvanizing was decidedly scant. Or, why not refer to the steel-pipe connections, which are similarly weakened by threading, but which are as integral a part of the radiator system as the radiators themselves? In both the screw-nipples and pipe-connections, not only is the material pared down, but the galvanizing, if any, is removed by the threading: so that these elements are far more liable to be eaten away than is the continuous well-galvanized sheet metal of the pressed radiator.

A Telling Comparison.

Consider further, the small $\frac{1}{4}$ -inch pipe, commonly used with vacuum systems, and compare the thinness of the wall of this $\frac{1}{4}$ -inch pipe, especially after cutting the threads, with the thickness of the pressed-radiator wall. Moreover, it is seldom that these pipes have any interior protective coating. Think of the trouble that would arise with vacuum systems if these little pipes should fail from corrosion. As this consideration seems to arouse no anxiety, is it logical to condemn on the same score the pressed radiator?

It is safe to say that a very small proportion of the pipe used for connecting radiators is really wrought-iron, although "wrought-iron pipe" is usually

specified. At the recent Atlantic City meeting of the American Society for Testing Materials, Professors Howe and Stoughton outline corroborative testimony of a most convincing character. Incidentally, Mr. Thompson's tests, concluding that steel withstands better the corrosive impurities of water than wrought-iron are more than substantiated by Professors Howe and Stoughton's conclusions. I beg to quote you just a paragraph from the latter:

Steel Pitted Much Less.

"It is found that . . . the wrought-iron skelp, though from the best makers, pitted in seven months much deeper than the steel did in thirteen months. It seems to us that the fairest way is to confine our attention to the deepest pit in each plate, because, as has well been said before this society, if there is a hole the water will run out, no matter how much the pipe weighs. Using thus the deepest pit in each piece, as a basis of comparison in our tests, the steel pitted very much less than the wrought-iron."

The comparison of the pressed radiator with the kitchen-boiler for durability is particularly inconsistent for the reason that the very service of the kitchen-boiler insures that the water is constantly changed, and the effect of any contained corroding agent is thereby multiplied thousands of times as compared with the corroding effect in a closed-circuit radiating system. Moreover, the majority of the kitchen-boilers are made of inferior grades of steel, and actual investigation has shown that the galvanizing they receive upon the inside is often of the proverbial "lick-and-promise" type: whereas pressed radiators are made of the very best open-hearth sheets, low in phosphorus, carbon and sulphur, and after manufacture are galvanized with a coating of $4\frac{1}{2}$ ounces of zinc to the square foot, increasing their effective thickness from 20 gage to 16 gage.

Original Form Defective.

On the subject of efficiency, the original form of pressed radiation was defective because of the peculiarly shaped top of each section, which interfered with the free circulation of the air and because in the light of more recent knowledge insufficient space was allowed between the sections.

As for the maintained superior radiating efficiency of cast-iron as compared with steel, Professor Carpenter, Profes-

sor Kent, Professor Allen, Mr. W. T. Monroe, M.E., and the many references quoted by these authorities incline to agree that the difference appearing between the radiating efficiency of various metals are due more to differences in surfaces, differences in sizes and shapes of the radiators tested and to different methods of tests, than to differences in metal. I beg to quote from Professor Carpenter's "Conclusions from Radiator Tests" (Page 112 "Heating and Ventilating Buildings.")

"The experiments do not show any sensible difference for different materials used in radiators, or for hot water or steam, provided the difference in temperature between the air in the room and that of the fluid in the radiator is the same."

A favorite implication of some of the exponents of cast-iron is that pressed radiation is from "30 to 40 per cent. less efficient." The really vital test for any radiation is that of heating the particular room it is designed to heat. The calculating of the appropriate size of radiator from which to expect the adequate heating of a given room is sufficiently standardized so that any type of radiator falling so far short of the radiating capacity of cast-iron could not continue to live in the heating world. It is conservative to say that pressed radiation continues to live after six years of existence. Is it not, therefore, abundantly clear that the practical differences between the radiating efficiency of steel and iron resolve themselves into mere talking points, and that any references to vague and indefinite tests that show to the contrary should not go unchallenged?

Necessary Conditions of Test

Comparative tests, to be of value, should be conducted by disinterested people and under specified, uniform conditions. It is too often taken for granted that the entering steam is "dry," whereas only calorimeter readings should be considered competent to determine this point. When even under such conditions differences do appear, it is well to bear in mind that great differences exist in condensation tests between the efficiency of different types of cast-iron radiation. For instance, I refer to tests conducted by Professor Allen at the University of Michigan, showing a difference of 16 per cent. between two nonular types of cast-iron radiators. I have also in mind the test which decided in favor of pressed radiators one of the most important installations of radiators in the world. This test was conducted by a committee consisting of the architect's engineer, the building engineer, the consulting engineer of the builders, and the contracting steam-fitter. It is noteworthy that the conclusions reached were not based upon condensation, but upon the heat-

units conveyed to the atmosphere by the respective radiators under identical conditions.

Judging by various published tables and the extensive adoption of 1-inch pipe for radiator service prior to the advent of cast-iron radiators, the most efficient proportion between containing capacity and heating surface of radiation is that of the 1-inch pipe, very nearly one pint to the square foot. The average proportion with the steel radiator is just about one pint to the square foot, whereas cast-iron radiators average about 50 per cent. greater. Besides this nearer approach to the ideal proportion of capacity to surface, there is less water and steam and far less metal to raise to the working temperature before effective heating is available, and to remain heated after the discontinuance of heat is desired; so that pressed radiators heat up more quickly when the valve is open and cool off more quickly when the valve is closed than cast-iron radiators. This positiveness of operation becomes an especially valuable consideration when heat is needed only for an hour or so a day—as in the spring and fall, when a little heat is required to take the chill out of the air, and during the mild winters that prevail in certain parts of the country.

Another argument advanced in favor of the cast-iron radiators as against the steel radiator is that the sections of the former possess all the advantages of individual units. For example, if they are broken they can be replaced, or, if it is desired to decrease or increase the size of a given radiator, one or more sections can be removed or added, respectively. The comparative unwieldiness of the cast-iron radiator, and the formidable task of prying apart and pushing together the predominating type of iron radiators having push-nipples however, are material points against the unit argument, which more than offset the advantages. It will usually prove cheaper, cleaner, and quicker, to send for a new pressed radiator than to tinker with the sections of the cast iron one.

Always Hear Both Sides.

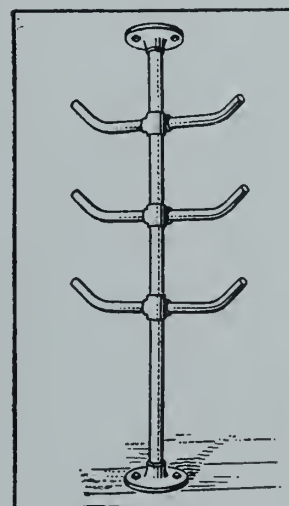
The personal equation, unconscious bias, or mere conservatism naturally enter into any consideration of this new subject as they enter into all others. So when you hear of failures of steel radiators, it may be well for you to know instances that give testimony on the other side. For example, there are several concerns of heating contractors which have made many large installations of the pressed type of radiators who to-day declare that they would consider it a great misfortune if they were deprived of this new form of radiation.

As with anything new, more is expected of pressed radiation than of the older types. The same defects of troubles

which would condemn the new are accepted as matters of course when they occur in the old. Job for job or radiator for radiator, it will be found to be absolutely true that, with the pressed radiators as they are made to-day, no more trouble develops than with cast-iron radiators.

A PIPE RACK OF PIPING.

One of the master plumbers of Dunkirk, N.Y., N. J. Lennertz, has built in his pipe-fitting shop in the basement of his establishment a pipe rack composed of standards formed up of piping. The general form of each of the standards is shown in the accompanying sketch. The upright may be of, say, $\frac{1}{2}$ -in. pipe with crosses as indicated and flanges top and bottom. The bottom flange is anchored into a concrete base flush with the cement floor of the cellar. The top flange is fixed to a ceiling beam and



A Pipe Rack Standard.

acts more or less as a brace to the standard. The branches are carried horizontally as indicated and then given a slight bend upward so as to prevent the piping held in storage from falling from the rack. The branches may, of course, be of 2-in. pipe with a rack requiring to hold a considerable amount of piping. In Mr. Lennertz's shop the rack comprises three of the standards.

BRASS WATER PIPING.

Brass hot-water piping is to be used in three concrete residences of good character, but of no great pretension, being erected at Dobbs Ferry, N. Y., largely if not wholly, as the result of the investigation in Springfield, Mass., to the effect that rust in the hot-water supply was the result of the use of galvanized steel hot-water piping. The cold-water piping is to be of galvanized pipe.



The Question Box



Subscribers are Urged to Send Questions to be Answered, or to Comment on Letters Published. Descriptions of Jobs Done or Shop Kinks are Also Invited.

WHAT KIND OF A SIGN IS BEST.

Editor Plumber and Steamfitter.—Am going to fix over my place of business in the spring and would like to get some ideas as to the sign to be placed in front, or on the front.

Will you not kindly enlighten me, or perhaps print this letter so that others may see it and give a few ideas along that line?

Winnipeg, Dec. 28.

"1492."

We shall be very glad to give our ideas upon this subject a little later, but desire to print this letter now and call for suggestions. Any one desiring to express themselves on this important subject can now have the floor. Suppose you take a walk around the streets of your town or city and examine the signs of the plumbing shops, then send us a report.—D.C.H.

SURFACE COVERED BY BRONZE.

Editor Plumber and Steamfitter.—Can you give me any information as to the amount of surface that a pound of bronze will cover?

Toronto, Dec. 6.

J.H.J.

It is stated by those who have had experience in the business that one pound of gold bronze will cover about one hundred and fifty feet of unprimed iron surface and if of primed surface, about two hundred feet. Should the aluminum bronze be used the amount of surface covered will run somewhere between three hundred and fifty to four hundred feet.—D.C.H.

SOME POINTS FOR THE "AD."

Editor Plumber and Steamfitter.—While a good many things have been said the last year on the subject of advertising, I wish that you would give a few brief points, or headings, that one could draw to when they were getting up the ad. for the paper. I would take it as a favor if you would print this as soon as possible.

Ottawa, Dec. 13.

V.V.S.

We will try and give a few points that should be considered and if they are looked after, we believe that there

would be a great improvement all along the line in certain sections of the country.

Point 1. Show the usefulness and convenience of the goods, or article.

Point 2. Improved sanitary arrangements give better health.

Point 3. The amount of annoyance and labor saved by having modern improvements.

We can give many other points, but we believe that these are enough for the first mental meal. We might say in closing, that brevity is the soul of wit. Therefore do not attempt to deliver a lecture in your ad. A few words that hit the nail on the head, are better than a whole column of descriptive reading.—D.C.H.

PLUMBING BUSINESS CHANCES.

Some weeks ago, a request was inserted in these columns from "J.L.," Ottawa, asking for information as to business openings west of Ottawa. As a result of the notice, Plumber and Steamfitter has received three letters giving information relative to openings in different places in Ontario. The same will be forwarded to "J.L."

WRONG METHOD IN PIPING.

I have seen a number of hot water heating plants where the application, in my judgment, is wrong and expensive. The return lines, for instance, instead of being carried on the basement ceiling, providing there is no basement radiation, is sometimes carried down below the floor and thence back to the boiler. My experience and judgment is that this is a wrong application of hot water heating design and is bound to work against the system. If the return main is placed on the ceiling you will have the benefit of it, whereas if you place it below the boiler, you will have to force the water back to the boiler, and there is not only the increased expense of running the piping there, but the unsatisfactory operation of the apparatus. In two buildings that I know of, the return mains were taken out of the trenches and hung from the

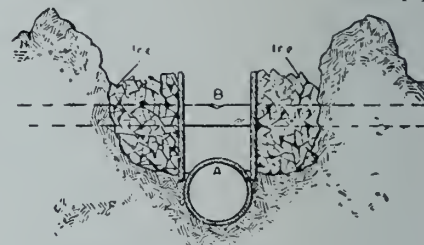
ceiling with satisfactory improvements in the operation of the system.

In my earlier work, I had a job where there were some basement returns and I conceived the idea of connecting the returns from the upper stories to the basement radiation, but I found it interfered with the whole system. While the basement radiation had to have the returns under the floor, the returns from the upper stories were placed on the basement ceiling and the system worked well.—W. M. Mackay before the Heating Engineers' Society.

FREEZING WATER IN A MAIN.

In removing an old water main the workman doing the digging accidentally hit a lead pipe branched from the new main, making a hole from which the water flowed quite freely. As it was impossible to shut the water off, a difficult problem presented itself as to how the leak could be stopped and the pipe repaired.

In the accompanying sketch A shows the main that was being removed and B shows the break in the lead pipe



Freezing the Water Main.

where the workman pierced it with a pick. Ice and salt were packed around the pipe which slowly froze the water within and stopped the flow. This enabled the men to solder up the hole, after which the ice was removed and the frozen water allowed to thaw.—Contributed by Frank L. Walter, Dayton, Ohio.

NEW PLUMBING TRADE PAPER.

"Plumbing and Lighting" is the name of a new plumbing trade paper, established by Bishop Bros., Melbourne, Australia. Here's hoping it will be a big factor in helping to improve the conditions of Australian master plumbers.

Committee Reports on Price Cutting

Toronto Master Plumbers Hear Paper on the Problem, Showing the Overhead Expenses of a Plumbing Business—Estimate Sheets for Members of Association Recommended.

The final meeting of the Toronto Master Plumbers' Association for the year 1910 was featured by the presentation of an important report from the Ways and Means Committee, in which the price-cutting problem was taken up in conjunction with other matters of like interest. The report was submitted by G. F. Frankland, the secretary of the committee. It was a careful resume of the hard year's work done by the committee in considering the problems which face the master plumber today.

"Your Ways and Means Committee would recommend that an appropriation of \$25.00 be made to procure an estimate sheet that would fully cover our local requirements," read the report. "If you see your way clear to do this, it will overcome one of the bad features at present contended with. The sheets could be put out in pad form and, each member having a binder or cover, it would be an easy matter to add sheets as they were used up. Estimate sheets are in use in Detroit, Chicago, Denver, and other cities and we believe some local plumbers use them.

"If we had a uniform estimate sheet, we would not have such troubles as figuring up a job and leaving out items like solder, caulking lead, oakum, a fixture perhaps, or as, in one case, where the plumber forgot the soil pipe for a four-storey building.

Figure a Fair Profit.

"We cannot advise the members strongly enough to put a larger percentage on your contracts for 1911, regardless of your competitor. You must all realize that you will be figuring from now out on the work to be done in 1911 and for your own sake, if not for the other fellows' get down to cases and put on a living profit . . . In the following table you will see about what the average expenses are in a plumbing business doing, say, \$20,000 a year: Salary \$1,300, rent \$240, light \$25, heat, \$50, telephone \$50, horse and wagon \$200, bookkeeper \$516, insurance \$25, taxes \$25, cartage \$25, car fares, etc. \$100, tools \$100, collections and bad debts \$200, driver \$450, waste materials \$125, replacing deficient goods \$50, labor lost \$150, allowances \$75, interest at 3 per cent. on \$4,000 capital \$120, postage \$10, stationery and printing \$40, association dues \$16, total \$3,892.

"Place the total, roughly speaking, at \$4,000. If your business for the year is \$20,000 and you figure 10 per cent. on your contracts, you will easily see where you stand. On \$20,000, your profit at 10 per cent. would be \$2,000 and, as your overhead expenses are \$4,000, you would be about \$2,000 in the hole. Of course, this figuring is done approximately but it represents fairly well the present condition of our trade.

"Of course, you may say, 'That is not my condition.' But why? Just because you have had an occasional con-

members be printed for the use of the members themselves.

To Retain Committee.

The report was discussed at some length and it was decided to make an effort to get the committee to continue their work during the present year.

Aldermanic Candidate.

Robert M. Yeomans, a member of the association, who is running for alderman in Ward 2, addressed the meeting in his own behalf. He pointed out that it would be a benefit to the trade to have a plumber in the council and asked for the support and assistance of all members of the craft.

M. M. O'Connell has been awarded the plumbing and beating contract for the building of the George Matthews



What too many master plumbers find in their shops. Loafing on the job and sitting so close together that they are squeezing the little fellow out.

tract at your own price for time and material or, what is more probable, you have let the profits of your jobbing pay the losses in your contract work. Just for your own benefit, figure out your expenses for 1910 and see if your condition is very much better than this."

The committee also recommended that a set of rules and by-laws be drawn up for the association and that a list of the

Co., Rideau St., Ottawa. J. R. Cameron has the heating contract for Barrett Bros.' building in Ottawa East.

The Eastern Pipe and Construction Co. have been incorporated, with a capital stock of \$50,000 to carry on the manufacture of wire-wound wooden water-pipe and continuous stave pipe in the town of Alexandria, Glengarry County.

Plumbing Specifications Approved by U.S. Govt.

As Prepared by the United States Board—Each Part of Work is Concisely Outlined and Illustrated in Accompanying Plates.

The following specifications for plumbing fixtures were prepared by the Board on Uniform Plumbing specifications for the United States Treasury, War and Navy Departments and are duly approved.

Where a running trap is called for in the specification for the work on main drain, between building and the city sewer to be "extra heavy" cast iron,

with fresh-air inlet on house side and heavy brass screw-jointed cleanout plug on sewer side, as shown on Plate No. 2. Fresh-air inlet to be extended to near top of manhole, and to be provided with return bend at top and a 3-inch diameter hole to be drilled into air-inlet pipe near bottom of manhole; 4-inch, 5-inch, and 6-inch traps to have 4-inch diameter fresh-air inlets and

cleanout plugs; 8-inch and 10-inch traps to have 6-inch diameter fresh-air inlets and cleanout plug.

Running traps on branch lines in building where required by specification for the work (except noted above) to be "extra heavy" cast-iron with cast-brass, screw-jointed, countersunk or recessed cleanout plug. If located below floor, top of plug to be set flush with floor line.

Cleanouts on cast-iron pipe.—The cleanout fittings on straight runs of pipe below basement floor to be extra heavy cast-iron pattern, as shown on plate No. 2, with gaskets and cover plates and wing nuts or bolts, or cast-brass screw-plug type of cleanout may be used if desired.

In event cleanout plugs are used on cast-iron pipe same must be cast-brass screw-jointed, screwed into heavy brass ferrule calked into hub of pipe.

Manholes.—The manhole for the main running trap to be constructed and to be provided with cast-iron frame and cover as shown by detail on Plate No. 2.

The manholes for main sewer to be constructed and to be provided with cast-iron frame and cover, as shown by detail on Plate No. 2.

The manholes for cleanout fittings on pipes below floor to be constructed and to be provided with cast-iron frame and cover, as shown by detail on Plate No. 2.

REPAIRING STEAM OR WATER PIPE.

A pinhole will occasionally cause a leak in a steam or water pipe, after the piping has been put up and perhaps been in use for a considerable time. It can be repaired with an ordinary carriage clip and yoke and a bit of sheet rubber packing, although a piece of an old rubber shoe would last for years.

You can readily see the application by referring to the sketch. The writer



Mending a Steam or Water Pipe.

stopped two leaks in steam pipes fifteen years ago by this method. The pipes have been in service ever since, and have not leaked. They were both in rather inaccessible places, where it would have been difficult to renew the pipe. At the same time, being in out-of-the-way places, the appearance of the patch did not matter.

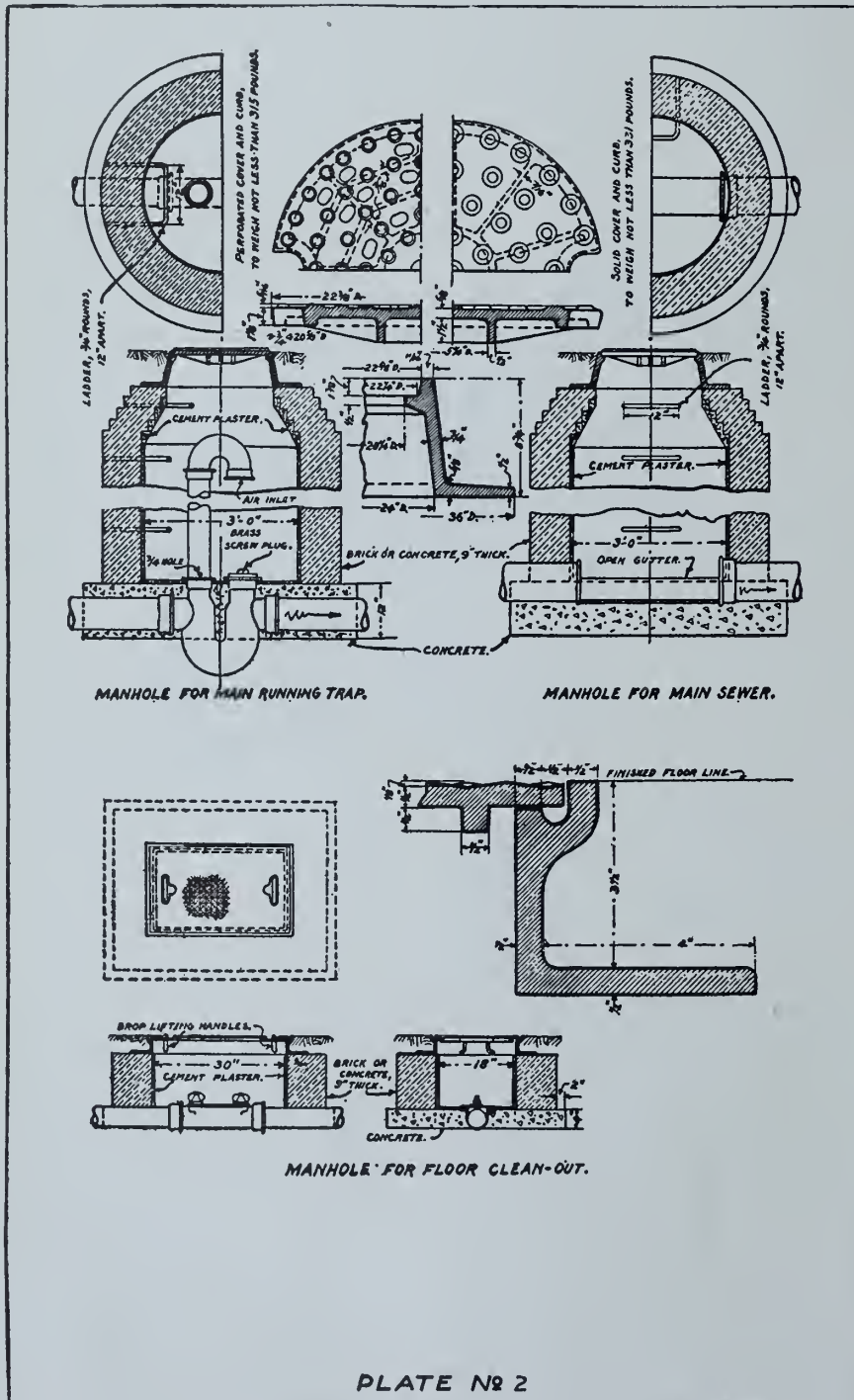


PLATE No 2

GOSSIP OF THE TRADE

John Birchard has joined the Toronto staff of Warden King, Ltd.

Richard H. Dyble, plumber of Sarnia, has sold to M. Kerr.

Caron & Suprenant, plumbers, Montreal, have registered.

Scott & Bennett, Galt, have issued a handsome calendar a copy of which has been sent to Plumber and Steamfitter.

Plumber and Steamfitter is in receipt of a Christmas card from the Honeywell Heating Specialty Co., Wabash, Indiana.

John T. Kane, plumber, of Chatham, has assigned to Sheriff O'Brien, of Northumberland County, says the Fredericton Gleaner.

J. H. Kelly, manager of the Western Plumbing Co., Lethbridge, has returned from a three weeks' vacation in Vancouver and Prince Rupert.

W. J. McBrayne, Sarnia, has taken charge of A. W. Humphries & Son's tin-smithing, furnace, plumbing and gas-pipe fitting department at Parkhill.

The Hamilton Plumbers' Union have asked the technical committee of the Board of Education to start a class for plumbers at the Technical School.

A tinsmithing and plumbing shop has been opened in connection with the Alberta Lumber and Hardware Co., Cardston, Alta. E. N. Wakely is manager.

At a special meeting of the Plumbers' Union, Montreal, it was decided to suspend the strike. Most of the men were taken back by their former employers.

A steam heating apparatus is being installed at the Great Northern Hotel, New Michel, B.C. Other places in the town are planning to follow the example.

The ratepayers of Owen Sound are to vote at the municipal elections on a by-law to loan \$20,000 to the Canadian Heating & Ventilating Co., who purpose to extend.

Ald. Harry Mahoney, of Guelph, has been nominated for mayor and likewise for alderman. He will not likely stand for mayor but will be in the field for re-election as alderman.

A dozen applications have been received by city clerk Duncan, of New West-

minster, B.C., for the position of plumbing inspector made vacant by the resignation of J. J. Mahoney.

The Fort William Christmas cheer fund was very handsomely augmented by donations of \$25 from the Master Plumbers' Association and \$10 from the Plumbers' and Steamfitters' Union.

L. McKenzie, for many years with the James Robertson Co., traveling in Alberta, has joined the staff of the Calgary supply house. Geo. McKenzie, a traveler with the Pease Foundry Co., Winnipeg, has joined the same firm.

Samuel Gordon, Hamilton, is asking \$500 from W. J. Walsh, plumber, for injuries. The plaintiff alleges that he had several muscles of his back torn while trying to turn the crank of the defendant's engine.

President Geo. H. Cooper, president of the N.A.M.P., has sent the following card to each member: "I, as president of the National Association of Master Plumbers of Canada, send you greetings. Merry Christmas and a Happy and Prosperous New Year."

Peter Gagnon, master plumber, was found asphyxiated in his workshop, 39 St. Claude Street, Montreal. A gas jet directly over his head had been turned on accidentally. An inquest without jurors was held at the morgue and the case was disposed of as one of accidental death.

The newly-elected officers of Plumbers' Union, No. 144, Montreal, are:—President, Andrew A. Hall; vice-president, E. Thibault; English recorder, D. Hammond; French recorder, R. Samson; financial secretary, F. Ward; treasurer, N. Denis; guard, A. McGillivray; executive board, J. Bowel, A. Valiquette, J. Cote, W. Dunn, J. Fallon.

The "Ironmonger" says: William Max Aitken, who by the narrow margin of 196 votes won a seat for his party in the obdurate county of Lancashire, was born thirty-one years ago at New Brunswick, Nova Scotia, where his father was a Presbyterian minister. The son went into business at an early age, and, young as he is, is reputed to be a millionaire. He is connected with the Standard Ideal Company, of Port Hope, Canada.

After being out on strike thirteen weeks, the plumbers working on the Chateau Laurier, Ottawa, have returned to work. They went out when the differences arose in Montreal, thirty men in all being concerned. Since then the work has been handicapped somewhat. As a number of non-union men were employed to take the place of the strikers, all of the latter will not be taken back.

A gasoline tank exploded Wednesday morning in G. J. Morton's plumbing shop in Yarmouth. An employe named Frank Trask was seriously burned and cut on the face and eyes. He was engaged in putting a tap on the tank and was using a torch. The moment the flame came near the vent the explosion occurred, the top of the tank was blown off hitting Trask, and knocking two other employes across the shop. It is feared he will be permanently blind.

The second annual banquet of the United Association of Plumbers, Steamfitters' and Steamfitters' Helpers Local No. 348, Lethbridge, was held in the Oddfellows' Hall, Thursday night, Dec. 22. L. Delbin was in the chair and among the toasts honored were "United Association," "The Employers," "The City," and "The Ladies." The speech making was interspersed with songs by Messrs. Blizzard, Cameron, Walker and Westley.

The Plumbers' Union No. 254, Winnipeg, have elected officers as follows:—President, W. Watson; vice-president, David Henderson; recording-secretary, David Young; secretary-treasurer, C. Timberley; delegates to Trades and Labor Council, James Cooper, W. Hillman and E. Samson; to building trades council, David Young, W. Watson and C. H. Timberley; executive committee, David Henderson (chairman), R. McNeil, W. Hillman, W. Quinn and F. Roberts. Membership was reported to be 150.

Michael McGrath, a plumber, 43 years of age, and E. T. Ford, a bookkeeper, 36 years of age, were burned about the face and hands as a result of a gasoline stove explosion in the plumbing establishment of M. Walsh & Co., West Vitre Street, Montreal, at 5.40 p.m., Friday December 23. Both men had to be taken to the General Hospital. McGrath, who

was at work in the plumbing shop, was burned when the stove exploded, while Ford, who was in the office, and who fainted when he saw the flames surround McGrath, was burned about the hands and face, before a couple of men who were passing in the street smashed the glass in the office window and pulled him out.

CENTRAL HEATING AT BRANDON.

Brandon is the first among the cities of Western Canada to instal a steam heating system by which any number of buildings are heated from a central plant. The work has been completed by the Brandon Electric Light Co. within the last few months and about forty or fifty places in the business section of the city have been connected. The doubt formerly expressed by Brandonites has since turned to satisfaction for the system has been giving satisfactory results. There are now many applications from business men and residents to be included on the system.

The heating mains already laid cover the principal business section, two blocks on Seventh, Eighth, Ninth, Tenth and Eleventh streets, four blocks on Rosser Avenue, and two blocks on Princess Avenue. Next year the Electric Light Co. will proceed with the laying of mains over the entire business district and, as far as possible, into the residential sections of the city.

Loss of Heat Prevented.

While similar systems have been in operation for over thirty years, it is only recently that the insulation of the piping against loss of heat has become standardized. The wrought iron mains are first carefully wrapped with asbestos paper held in place by spirally wound copper wire. Between the iron pipe and the wooden insulating casing there is a one-inch air space, the pipe being centred and supported by roller and ball bearing guides, which allow free expansion and contraction with changes of temperature. The chief insulation is secured by the use of wood casing four inches in thickness. This casing is made up of kiln dried, tongued and grooved white pine.

The inside of the casing is lined with bright tin and the outside tightly wound with heavy galvanized wire. To prevent decay the whole log is covered with a heavy coating of asphaltum. A thorough system of under drainage is secured by placing porous drain tile along and below the entire system of mains and piping (same to sewers). This careful construction results in an insulation against loss of heat so near perfection that condensation in the street mains is reduced to an average not five per cent. of the season's output. Expansion devices are enclosed in

brick boxes every fifty feet and man-holes give access to the valves at the street intersections.

How Heat is Metered.

The heat is metered by a simple device. The condensed water is measured as it flows from the building, it being possible, by applying scientific principles, to find how much heat has been given off to condense that amount from steam. One lb. of steam is one lb. of water expanded 1,700 times by heat and changed from liquid to vapor form. This evaporation requires a fixed number of heat units. The giving off of that heat condenses the steam back into water.

BIG PROGRESS IN VANCOUVER.

To be in business only a year and have a staff of about twenty is a pretty good record—even for the country of

ON A BUYING TRIP.

Two visitors in Toronto this week, were F. W. Armstrong, general manager of the Western Supplies, Ltd., Edmonton, and Mr. McKnight, director of the same company. Mr. McKnight has gone on to Owen Sound.

F. W. Armstrong was formerly with Metals, Ltd., but some time ago he went west. Eighteen months ago he was instrumental in starting the Western Supplies, Ltd., and the company has since met with signal success. Heretofore, the scope of the concern has been limited to supplying the plumbing trade in Edmonton, but now it has been decided to branch out and make a bid for a share of the trade of the Province of Alberta. Mr. Armstrong is in Toronto at present on a buying trip.

He speaks enthusiastically of the trade



Staff of a Vancouver Firm in Business only a Year.

big things—the west. And to make certain that this isn't a big story, but the cold fact, Webb & Young, South Vancouver, B.C., had a photographer "snap" the boys on a day when the sun was shining and the Scotch mists had been dissipated. They've got the goods all right and the picture proves it.

Mr. Webb is standing on the extreme left and Mr. Young is on guard at the extreme right, and both of them learned the trade in Vancouver—possibly that's why they have grown so fast.

The firm own a lot on Main Street, South Vancouver, and intend to build a three-storey building next year, occupying the ground floor themselves.

prospects in Alberta, but asserts that the day of "boom" prosperity has passed and is now replaced by steadier and more satisfactory progress.

APPRECIATES PAPER.

Editor Plumber and Steamfitter,—Enclosed find \$1 in payment for enclosed bill for subscription for Plumber and Steamfitter. I must say that the paper has been a source of valuable information to me and I always enjoy reading it.

J. J. O'Toole.

Dartmouth, N.S., Sept. 27.

New Buildings, Water and Sewerage Systems

Opportunities Offered by Municipalities and Private Enterprise for New Plumbing, Heating, Ventilating or Sanitary Systems—Work Being Undertaken in Every Section of the Dominion.

Municipal Undertakings.

Burnaby, B.C., is considering the installation of a new water system, to cost \$150,000.

The council of Moncton, N.B., is considering the construction of a reservoir, to cost \$200,000 to \$250,000.

A. Earley has been instructed to prepare estimates of the cost of a sewerage system for Wrightville and Walkerville, in Hull.

The tender of the Westholme Lumber Co., of \$100,000, for the grading of Second Avenue, Prince Rupert, B.C., has been accepted.

The ratepayers of Victoria, B.C., will vote shortly on a by-law providing for the development of Sooke Lake as a source of water supply.

The Munderloh Co., Montreal, have secured an order for 16,000 feet of Mannesmann seamless steel piping for the purposes of water distribution at the Chanook collieries there.

The ratepayers of Lachute, Que., have sanctioned the purchase of the water-works system of the Laurentian Water & Power Co., and the raising by loan of \$20,000 for the improvement of the system.

Public Buildings.

A hospital is to be erected at Hull, Que.

The new Knox College, Toronto, will cost about \$400,000.

The Winnipeg Y. M. C. A. building fund reached a total of \$351,087.

Work on the new Masonic Temple, Ottawa, will begin on May 1.

The Sarnia Board of Education has asked for \$45,000 for a new school.

Cranbrook, B.C., has decided to build a new city hall, at a cost of \$15,000.

Tenders will be called for a new Y. M. C. A. building in Westminster, B.C.

Plans for a public abattoir, to cost \$25,000, have been prepared in Calgary.

Port Arthur, Ont., is to erect a new Collegiate institute, at a cost of \$125,000.

Plans for the new Vancouver labor temple call for an expenditure of \$127,000.

A new wing at a cost of \$80,000 will be added to St. Luke's Hospital, Ottawa.

Strathcona, Alta., will vote on a by-law to raise funds for a public library building.

Steps are being taken towards the erection of a Y.M.C.A. building in Chilliwack, B.C.

A new medical school is proposed in connection with the Western College, at London, Ont.

The Fort William, Ont., board of health is recommending the erection of an incinerator plant.

Brantford ratepayers are voting on a by-law to decide the site for the new Government buildings.

London, Ont., ratepayers will vote on a by-law to set aside \$75,000 for the erection of a new city hall.

Nagle & Mills, Ingersoll, have been awarded the contract for the erection of the Goderich Post Office.

Plans are being prepared in Vancouver for the installation of underground sanitary conveniences, to cost \$10,000.

Brookville, Ont., Orangemen will erect a temple in memory of the founder of the order in Canada, at an outlay of \$40,000.

The congregation of the Ilderton, Ont., Methodist church have decided to rebuild. The church was recently destroyed by fire.

P. J. LeBlanc and O. J. Dunham have secured the contract for the new wing to be added to the postoffice building at Moncton, N.B.

The management of Alma College, St. Thomas, have decided on a new wing or a separate building at an approximate cost of \$30,000.

Members of Charlotte Street Methodist church, Peterboro, are canvassing for funds to add to the \$25,000 already raised for the building fund.

The Ontario Government and the University of Toronto are to act together in the institution of a Royal Ontario Museum, at a cost of \$400,000.

The old postoffice building, Montreal, facing on St. James Street, is to be remodelled, at a cost of \$140,000. It will be fireproofed and brought right up-to-date.

Barrie has spent \$17,000 this year on a new wing and improvements to the hospital building. The town made a grant of \$1,000 to help defray the expenses.

The Witner Club will erect a large club house in Montreal, work to be commenced in the spring. The club has been incorporated with a capital stock of \$149,000.

The Vancouver Commercial Club will erect a 10-storey steel, fireproof building, part of which will be used for club pur-

poses. An option has been taken on Pender Street property.

A committee has been formed to obtain competitive plans from the best club architects in Victoria, Vancouver, Tacoma and Seattle for the erection of the new Union Club building (6-storey) at Victoria, B.C. Estimated cost, \$120,000.

The appropriations in the report on schools presented to the Vancouver council include the building of new schools at Kitsilano, \$57,000; Bayswater Street, \$57,000; Broadway and Lakewood, \$92,000; and extensions to the existing schools at Tenth and Cypress, \$92,000; Charles and Templeton, \$81,000; King Edward High School, \$150,000; Britannia High School, \$145,000.

General Buildings.

The Vandyke Motor Co. may establish a branch factory in Ottawa.

The G. T. R. will build a new station at Richmond, Que., in the spring.

It is stated that Hydro-Electric repair shops will be erected in London, Ont.

The Woods Motor & Taxicab Co. will build a three-storey block in Quebec City.

It is reported that Penmans Limited, Coaticook, Que., will extend their plant in the spring.

The Northern Investment Agency will erect a six-storey office building in Edmonton in the spring.

The Bank of British North America will erect a large bank building in Vancouver next spring.

The store of the Taylor, Karren Co., at Magrath, Alta., was destroyed by fire, causing a loss of \$30,000.

E. J. Ryan has received the contract for a business and apartment block in Vancouver to cost \$100,000.

The Canada Cement Co., Montreal, has secured property in Winnipeg and will erect a large plant there next year.

The Canadian Electric Mfg. Co. will, it is stated, erect a factory at Vancouver to manufacture electric water heaters.

Among recent Ottawa permits for buildings were: John Campbell, dwelling, \$2,500; G. S. Green, dwelling, \$3,800; Mrs. John Cowan, dwelling, \$3,500; W. H. Craig, dwellings, \$3,000, \$2,500, and \$3,000.

Vancouver building permits include the following residences: Frank Parsons, \$3,800; H. Greenwood, \$2,000; J. Skeffington, \$3,300; R. Reid, \$3,000; Bentley & Wear, \$7,600; Currie & Wallace, \$3,500; E. F. Avery, two houses, \$4,000; Lambert & Sedney, \$6,500; A. Darion, \$7,200; I. S. Burton, two houses, \$5,000; P. H. Fraser, \$2,700; Prudential Builders, \$3,500.

Cutting Patterns in the Tin Shop

Readers of Plumber and Steamfitter are Requested to Make Use of This Department—Questions Regarding Patterns Will be Answered by Experts—Discussion is Also Invited on Any Matter Pertaining to the Tin Shop.

ENVELOPE FRUSTUM OF SQUARE PYRAMID.

Let G H K I be the elevation of the article, C A E D the plan of the larger end and L M O N the plan of the smaller end. Produce the hip lines C L, A M, etc., in the plan to the center P. Construct a diagonal section on the line A P as follows: erect the perpendicular P F, making it equal to the straight height of the article, as shown by K R of the elevation. Likewise, erect the perpendicular M B of the same length. Draw F B and A B. Then P A B F is the diagonal section upon the line P A. Produce A B indefinitely in the direction of X, and also produce P F until it meets A B extending in the point X. Then X is the apex of a right cone and X A the side of the same, the base of which, if drawn, would circumscribe the plan C A E D; therefore, from any convenient center, as X of Fig. 150, with X A as radius, describe the arc Z

to the other side, D E of the plan, and so on, until the four sides of the base have been set off. Draw Y X, J X, etc., cutting the arc B U in the points F, S, etc. Then draw the chords B F F S, etc., thus completing the pattern.—E. R. Probert in American Artizan.

PLUMBING AND HEATING MARKETS.

December 30.—Now that 1910 has come to a close it is possible to review the business of the year. The conclusion is reached on all sides that the volume of trade was eminently satisfactory. Supply houses report that, while they cannot claim a record breaking year, they had all they could do in every branch of the trade. The extensive nature of building operations in all parts of the country meant increased activity in the plumbing and heating business. Plumbers were kept busy right up to the

heating work moved rapidly all year and only the advent of really cold weather coincidental with the holiday season, brought some measure of cessation.

It is reported that collections were quite satisfactory during the year. Of course, there have been exceptions to the rule and some dealers have been dilatory in making payment but, on the whole, the money situation has been good.

Enamelware has been heavily in demand, the increased activity being traceable to the growing desire on the part of the public for better bathroom fixtures. The price has seen some advances during the year but none of the increases have been of a material nature.

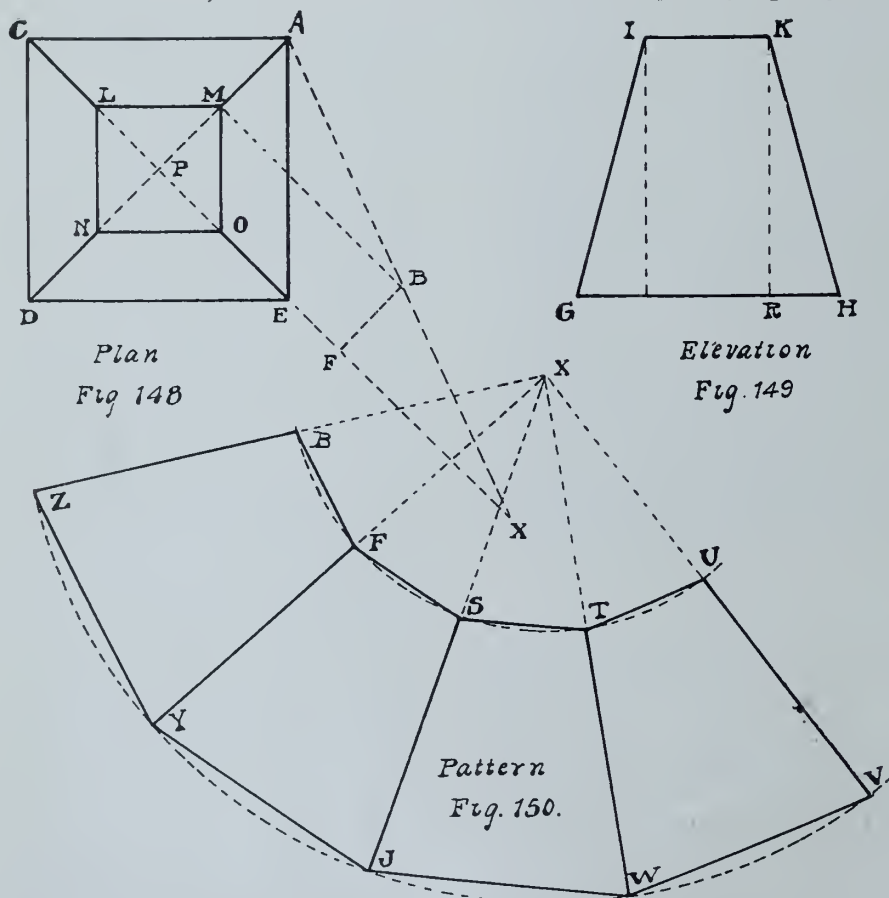
Boilers and radiators have been installed in larger number perhaps than in any previous year. Some local jobbing houses say that they have never had a more profitable year in these lines, the demand having been particularly heavy and well-sustained into the winter season. Prices have been firmly maintained throughout the year.

Iron pipe and fittings have been in good demand. The prices quoted to-day are a little easier than the prevailing quotations throughout the year. The discounts on malleable fittings are quoted from $37\frac{1}{2}$ to 40 per cent.; and cast iron fittings from 60 to $67\frac{1}{2}$. Cast iron bushings are 70 and malleable 65. Nipples are quoted at 75 and 10; headers 60; flanged and malleable-lipped unions, 65 per cent. Galvanized pipe is \$6.35 and black pipe \$4.70 per hundred feet, 1-inch size.

Solder has firmed up during the year somewhat and now sells at $20\frac{1}{2}$ to 21c for half-and-half. Wiping sells at 18c to 19c. There has been a fairly good supply forthcoming, but the demand has kept pace right along.

A satisfactory feature of the market has been a steady increase in the demand for brass goods. Plumbers' brass supplies have sold readily and the market is growing.

Supply houses are looking for an equally good year in 1911 as the trade gives every evidence of unabated prosperity.



Envelope of the frustum of a square pyramid.

Y J W V, and from the same center, with the radius X B, draw the arc B F S T U, both indefinitely. Draw Z X, cutting the smaller arc at point B. Make the chord Z Y equal in length to one side, C D of the plan, and Y J

present time and the result was a steady demand for all goods and supplies.

The heating trade was perhaps even busier than the plumbing, from the standpoint of the jobber. Supplies for

THIS PAPER CLOSELY WATCHED.

Some weeks ago Plumber and Steamfitter contained a request from an Ottawa man for information as to good openings to start in the plumbing business. So far five replies have been received from different parts, containing word of business chances. The Question Box is becoming a valuable feature of the paper. Likewise, the many answers received show how closely this paper is followed by the trade in all parts of the country.

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Johnson's Handy Manual for Plumbers and Steamfitters	1 00
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Mechanical Drawing for Plumbers, by R. M. Starbuck	1 50
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EMERY WHEELS.

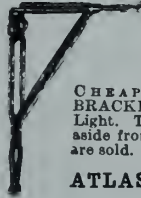


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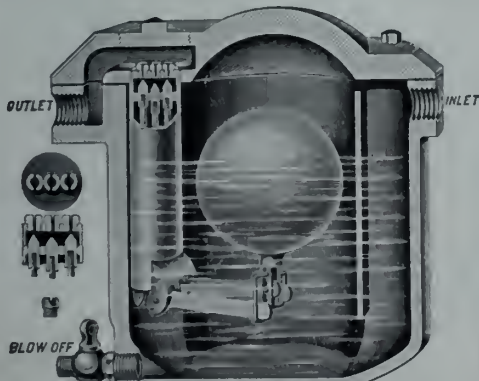
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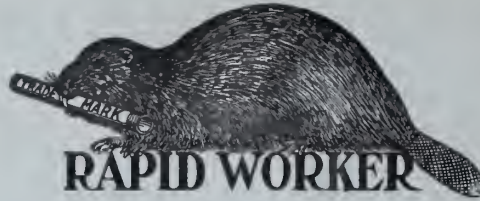
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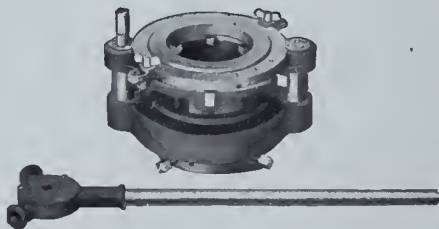
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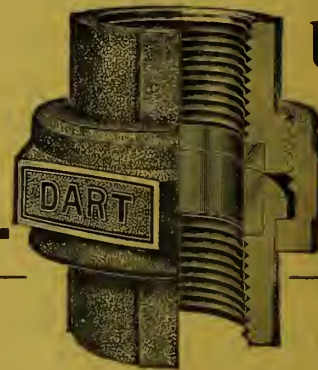
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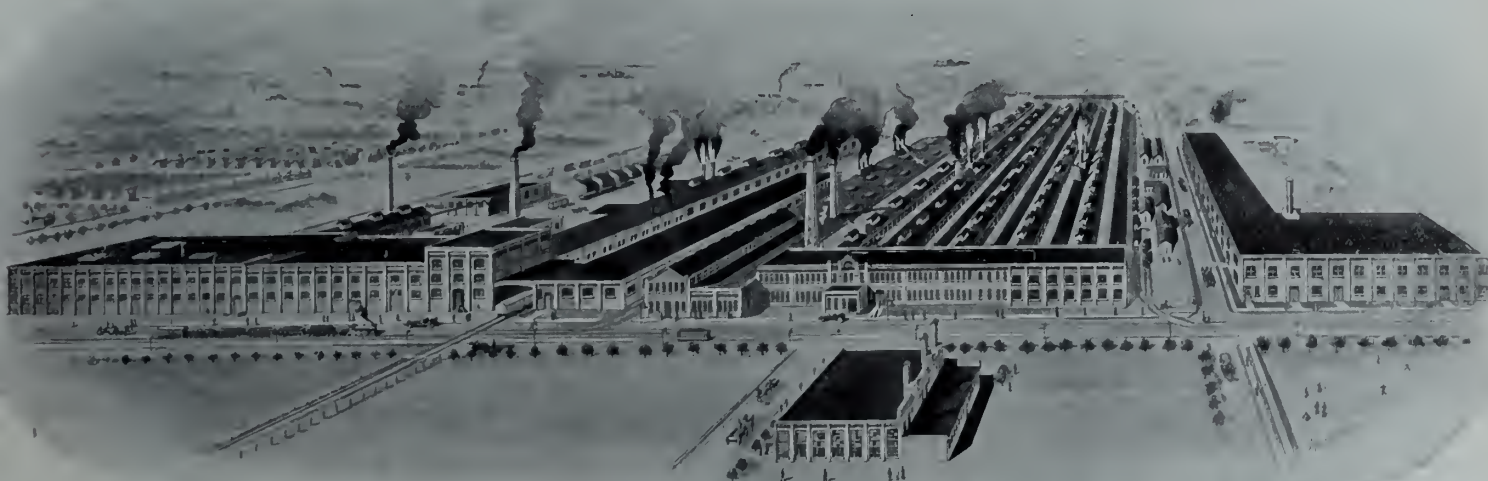
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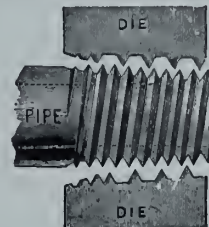
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Of course, I know you won't, because you will be so tickled with it that your wife will wonder what ails you and the boys will slip around quietly and inquire if it is a boy or a girl!

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TORONTO, JANUARY 16, 1911

START THE NEW YEAR RIGHT.

There is a great deal in starting the new year right. Man exhibits an instinctive desire to "turn over a new leaf" at the beginning of each year; he seems to feel that it is well to begin on a new basis, to remedy old shortcomings, conquer bad habits and set up higher ideals. His lofty aspirations, expressed in the form of new year resolutions, frequently do not last long, but he is all the better for having conceived them. The man who does not make new year resolutions—and endeavor at least to keep them for a while—is not likely to make good resolves at any time of the year; he is in danger of falling hopelessly into the rut.

Let the master plumber then start the new year right. He should very seriously consider the past as it has affected him and see where his methods have been astray. It is unfortunately true that a great many plumbers, if they set out to correct themselves in all their business shortcomings, would soon have a formidable list of new resolutions confronting them. Everything cannot be done at once, but an earnest endeavor to improve business methods and heighten trade ideals would ultimately lead to the desired object.

There are two resolutions which all master plumbers should take even if some may have been thoroughly living up to them during the past year. The first is: "My business this year must be conducted on a business-like basis." One great reason why so many plumbers are failing to get the profits that they should, is that they manage their affairs carelessly. They have devoted their attention and their energies almost exclusively to the practical end. They have probably worked up a good trade and won the fullest confidence of their customers. But at the same time they have neglected to study problems of management and the profits made on contracts have been lost through leakages, which a practical business man would soon detect and effectually remedy. The plumber is too often, in fact, a one-sided man; and how can a one-sided man handle a business, which is many-sided? The plumbing trade calls for intelligent handling the same as any other business; why not resolve to give to the business end fitting attention during 1911?

New resolution number two is: "I must not cut prices." Price-cutting is the worst feature of the trade, the hardest obstacle that confronts the plumber who wants to be honest with himself and his competitors. It is worse than lack of business method, which can only be charged with the wasting of profits; for price cutting completely eliminates profits. Competition may

be, as per proverb, the life of trade but, when carried beyond a certain point, it becomes the death of legitimate business. What benefit is to be gained by taking a contract at a price that precludes profit, merely to get ahead of competition? It is too much to expect that the whole body of price-cutters—may their tribe not increase—can be induced to see the error of their ways. Some will always slice margins to oust competition that is no reason why others should be guilty of the same folly. It would be better to remain idle then take a contract when there is no money to be made—the time at least would be saved.

BETTER QUALITY IN DEMAND.

One of the marked tendencies to-day is the ever increasing demand for quality in plumbing goods. There are still a great many people so short-sighted that they consider the price only and would rather have cheap fittings installed than goods of more lasting quality, but in practically all medium priced, as well as in high-class dwellings, better grade fixtures are now the order. It is well for the master plumber to encourage this tendency. He may not increase his profits to any considerable degree. In fact, he may lose a customer or two if he resolutely advises against the purchase of cheap goods. He will find, however, that his work gives better satisfaction and that his customers are more likely to come back to him. Neither will he be subjected to demands from irate householders to replace goods which have not lasted or have rapidly displayed defects.

Some plumbers—the class is not numerically great, however—will refuse to accept contracts where the householder insists on the installation of cheap goods. They will first endeavor to show him the folly of the idea but, if he persists, will refuse to touch the work. It is not a bad idea in many ways. It enables the plumber to guarantee his work and to feel sure of it himself. It keeps his reputation as a plumber high. A cheap job is the poorest advertisement a plumber can have; the fittings may have been selected against his will but the work looks cheap, and it counts against the man who did it.

To talk quality to a customer, pays. Too many plumbers are willing to pander to the penny-wise pound-foolish ideas of a prospective patron and do the work just as cheaply as he could desire. They do not think of the future any more than the man who is having the work done; that is, not at all. Talk quality and you will have better satisfied customers in the end.

GET AFTER THE FARM TRADE.

The country districts present a wide field for the enterprising plumber. The time is coming, beyond all shadow of a doubt, when modern plumbing, gas lighting and the comforts now enjoyed by residents of the city will be found in the home of the farmer. Farm life is reflecting city conditions more every day. It is not so long ago that the house of the agriculturist was devoid of modern comforts; to-day the progressive farmer has a telephone and a furnace and mail is delivered at his door every day. Some of the well-to-do class have even taken to automobiling. It will not be a long step to the steam heating and up-to-date bathroom stage.

This is a season of the year when both the plumber and the farmer have sufficient time to discuss the problems of equipment for home and farm buildings, which would be calculated to lighten the burdens of life and increase the comforts. It is a splendid opportunity then for the plumber to lay the foundation for a good country trade, by taking a trip out through the countryside and visiting the better class of farmers. Some enterprising members of the trade have adopted the policy of arranging meetings in the evenings at country school-houses. By a little careful preparation of facts and by providing themselves with charts, showing various equipments, they are able to give an interesting address to the residents of that neighborhood on methods of improving life on the farm. The conventions held in Canada have clearly demonstrated that the plumber as a rule is a good speaker, when discussing matters relating to his trade. He could depend, then, on making a hearing for himself at an Institute or Grange meeting, and getting his auditors interested in the subject. A series of calls afterward would bring him personally in touch and most certainly result in the securing of some contracts.

Many plumbers have created a lot of business by canvassing the country for acetylene and gasoline lighting plants. Any sanitary engineer, favorably located to cater to the country trade, can depend on doing a profitable business in these lines, if he makes an effort to get the ear of the farmer.

More important still would be the connection that a man would thus make for himself. He would become known to the farming community and would stand to benefit largely when the day comes—and it is not far off—when the home of the farmer contains the comforts now found in the city house.

THE ANNUAL INVENTORY.

Do you take stock every year? If you do not, it is time you began. No business can be conducted successfully unless the stock is gone over every year and the exact standing, financially and otherwise, accurately ascertained. Some plumbers give little attention to business detail during the year and neglect to take stock at the end; the natural result being that they never know where they stand and are not in a position to tell whether or not they made money during the year. This careless attitude is very reprehensible. The plumber needs to apply business principles to the conduct of his affairs as much as any other business man.

Stock-taking is an operation which, if carried out thoroughly, will enable the proprietor to find exactly where he stands financially and what profits he made during the year. Only by a careful listing of the stock

is it possible to accurately gauge the amount of business done and to lay plans for the future with any degree of accuracy. By this means it is possible to see in what directions trade has been most active, where profits have been reaped and where money has been lost. Stock-taking is the barometer of business; it indicates when all is plain sailing and gives warning when storms are ahead.

During the month of January, most plumbers will find time to go over their stock and make an inventory of the goods on hand. It would be a wise plan to "kill two birds with one stone," seizing the opportunity to house-clean the store and clean up the stock in readiness for a bigger and better trade in the year that is ahead.

THE PLUMBER AND HIS COLLECTIONS.

The past year was a satisfactory one in point of collections. Most plumbers found that, on the whole, it was not difficult to realize promptly on their work. There were exceptions, of course, to this rule and in some cases unjust regulations and restrictions proved a hardship. One case can be quoted where a plumber carried out an extensive contract very successfully, but received only 60 per cent. of his money because a connection had not been made. A delay on the part of the civic sewerage department, was responsible for this connection not being made. It was a matter of a few hours work only, but the contractor unjustly held back 40 per cent. of the contract price. This occurred in the very middle of the busy season when ready cash is an important consideration to the plumber. The man thus treated rightly considered that he had been unjustly used. In the matter of collections, the plumber is undoubtedly hedged about by conditions that are not fair and a determined effort should be made to have them remedied.

At the same time, the plumber himself, through laxity of system, is often responsible for the slowness with which money is realized on work done. The collection end of the business is undoubtedly one of the most essential. Collecting, under ordinary circumstances, is not an easy matter. Few men display much readiness in meeting bills and the longer the account runs the harder becomes the settlement thereof. The work should never be "put off"; the persons owing accounts will so all the putting off that the business can stand. To be successful, then, a man must not for a day lose sight of his account books, nor permit himself to give up any particularly slow pay customer. By persistent and unrelenting effort, the pocket of the recalcitrant debtor can always be reached in time. Collecting is not a pleasant task, but it is so absolutely necessary that no one can afford to shirk it.

It would be well for associations of master plumbers during the coming year to take up the question of collections and devise means of protection against the unfair tactics often resorted to. Individually, each plumber should strive to look after his own accounts better. Satisfactory figures on the right side of the ledger will be the result.

It is, in a sense, a sign of improved conditions in the plumbing trade that there is not as much jobbing work to do nowadays as in the past. It bespeaks better workmanship, better material and better methods.

Shower Baths are a Profitable Line

Plumbers Can Work Up Demand and Instal Baths in Schools, Public Buildings and Factories—How a Winnipeg Plumber Increased His Sale of ath Room Accessories.

There is a wide scope for the enlargement of the plumbing business, there being a good variety of articles which might be taken up and handled with profits. In the last issue of *Plumber and Steamfitter*, mention was made of bathroom accessories, such as towel racks, wall mirrors, soap trays and medicine cabinets and supplies. Another paying department would be shower baths, bath sprays, massage brushes, etc. There is an active demand for such goods in larger centres particularly, but even in comparatively small places there would be a chance for profitable business.

This is an age of advanced thought in the matter of health. People are recognizing more and more the necessity for proper exercise, pure air and cleanly habits. Where 15 years or so ago, the bath-tub was a luxury only for the most wealthy, it is to-day found in the homes

his field. By demonstrating the beautiful advantages, it should not be a difficult matter to prevail on school boards to install a shower bath in each school gymnasium. After boys have been engaging in a strenuous game of football or lacrosse, a bath becomes a practical necessity. By visiting the heads of manufacturing concerns, it should be possible to secure orders for the installation of baths in practically every factory in town. The manufacturers are to-day seeing the wisdom of providing better facilities for their workmen. In many factories reading rooms are found for the use of the men during the noon hour and before work hours; the result being that they are able to improve their grasps of technical subjects and to broaden their general knowledge, becoming better workmen and more valuable to their employers. In some factories,

baths. He conducted a health campaign, enlisting the assistance of doctors and securing the backing of the local board of health. The newspapers took the idea up and shower baths were, as a direct result of the agitation quietly stirred up by this energetic plumber, installed in public buildings, factories and stores. As he was the only plumber in the place, handling the fixtures, he got all the work and is still making a good profit from that branch of his business."

Handle Bath Sprays.

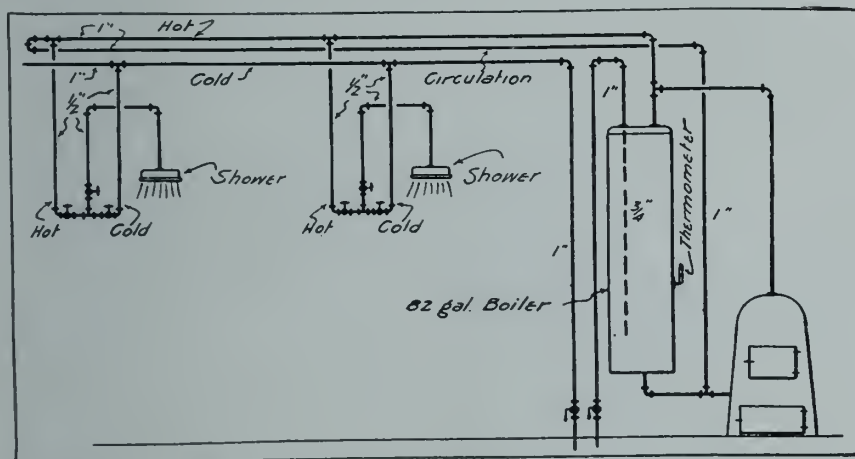
For the homes, the bath spray will be more readily salable than the shower bath. It should not be difficult to sell one with every contract handled, the cost being moderate enough to place it quite within the reach of all.

A Winnipeg plumber is reported to have made a good profit on this line by making an effort to sell, not only to new customers but to his old ones as well. He made calls at all houses where he had installed bathroom fittings, ostensibly to make an inspection and see how things were working. This evidence of interest gave the impression at once that he was a man of very conscientious ideas and he followed his advantage up quickly. "Everything seems alright," he would report. "I was pretty sure it would be working well because we are very careful in our work. I always make it a point to go around and see that customers are satisfied, however. You have all the supplies you need, I suppose? Let me see, you got from me a shower spray, medicine chest, towel rack—" and he would proceed to enumerate all the articles that he had seen were lacking in the bathroom. Receiving the reply that these articles had never been bought, he would express surprise and point out the advantages of each particular article. In practically every case, he would make sales by this method and, in addition, create the impression that he was zealous in the interests of his customers.

Carry Stock of Tile.

There is a good profit in the handling of rubber tile for the floors of bathrooms, rubber mats for kitchen sinks and for use on the inside of baths, as well as the various kinds of tile used for the floor and walls of bathrooms. Bathrooms are incomplete without these articles and plumbers in the smaller cities and towns could handle them with much profit. In the larger cities, builders' supply houses make a specialty of tiling and the plumber would meet with considerable opposition. Still, he should find it possible to do sufficient business to make the branch pay.

The Metal Worker gave the accompanying sketch as a sample of a layout for shower baths, which could safely be followed.



This Layout for Shower Baths Needs no Improvement. The return is O.K.—
From Metal Worker.

of the most humble. Few houses are built now without a bathroom. Further, the beneficial effects of the shower bath are being recognized and the use of this instrument of health is getting more general. It is becoming a recognized feature of all public buildings and is found not only in Y.M.C.A. and athletic clubs, gymnasiums, etc., but in civic buildings, social clubs, large stores and factories. Many homes are installing shower baths. It would not be speaking too optimistically to say that the future will see the shower bath a feature in all homes where the cost can be met without difficulty.

How to Create Business.

An active demand for shower baths could be created without difficulty by a plumber who was prepared to "work"

too, shower baths are provided, enabling the men to clean up thoroughly before going home at night. In shops where the work is heavy and dirty, the advantages are very pronounced. The men are able to leave the factory feeling clean and refreshed. That their health is better and their capacity for good work improved cannot be doubted and in this way the employers also reap the benefit.

The presentation of the above facts, with other arguments which would readily suggest themselves, would enable a plumber to secure from the manufacturers in his town large orders for the installation of shower baths.

"One of our best customers," said the sales manager of a plumbing supply house, "was a plumber in an Ontario city, who made a specialty of shower



POINTS ON HEATING

by
CHAS. H. DENISON



These articles are not intended as a thoroughly exhaustive treatise upon the subject. It is the purpose of the writer to get out the series in such a manner that assistance will be rendered to the craft, in general, and perhaps some light given to those who intend to heat their homes by making use of the modern methods. Pass the articles along, my friend, for the chances are that some of them may do certain perplexed individuals a little good.

CHAPTER I.

For more than a thousand years the fire place was probably one of the most generally used means of heating the dwellings of man. With the growth of the inventive spirit through the different ages, various other methods of heating have come into play, such as stoves, gas, electric heaters, hot air furnaces, steam and hot water apparatus. It is not so long ago but what many now in the arena of business can remember when the hot air furnace reigned supreme. Those who made it a business to install this particular class of heating apparatus, seem to have stabbed themselves with their own knives (so to speak) in as much as they were so anxious to get in the work that they soon placed the figures for a job within the starvation limit in order to compete and the result seems to have shown that the business is not what it was years ago.

Certain parties, who would never see anything good in any apparatus that did not meet with their approval, will claim that a hot air furnace never could heat a residence satisfactorily under any conditions. This is not so, for many have been installed that performed their service to the satisfaction of the owner. Let me speak in a whisper, though, and say that these same hot air jobs were NOT put in at a figure of about \$60 or \$85. The man that put them in got his price and could afford to do the job correctly, but I shall not discuss "hot air," vs. steam here. About the simplest kind of a steam job, as used to-day, may be called direct steam heating with a gravity return. The job consists of a boiler, set at some convenient place (generally in the basement) and of radiat-

ors which are generally placed in, or under the rooms to be heated.

The steam passes through pipes suitable for the purpose, from the boiler to the radiators, after having been rightly connected. The water formed by the condensation of the steam returns, by gravity, to the boiler and again becomes steam and so the chain is kept up resulting in the successful heating of the residence, always provided that the apparatus is properly proportioned and the work done in the right manner.

Now in order that the water may return to the boiler, a slant, or as the fitter calls it, a "pitch" is given to the steam pipes which, if the mechanic does the job correctly, accomplishes the matter efficiently. The amount of "pitch" that the fitter generally desires to obtain is one inch in ten. That is, for every ten feet of steam pipe, he seeks to get one inch of slant, or "pitch." It is not always necessary (nor, in many cases will the height of the basement allow it) to have this degree of "pitch." Some of the best jobs the writer has observed have worked on as little pitch as one-quarter of an inch in ten feet.

This simple form of direct steam heating has been variously modified, changed, combined or improved upon in the past few years. One form that we will mention at this place is the vacuum systems. For these it is claimed an easier circulation, greater efficiency from the coal used and that smaller pipes can be used between the boiler and the radiators, which same will be set forth later on.

While all these points may seem very primary to the man who has been in the trade and business for years, you want to remember, my friend, that there is always some one starting; some one whose information might be greatly improved upon and then think of the hundreds of questions that are asked every year by the customers who seek a little light for their own good. I made that remark for the benefit of the man who knows it all.

One of the simpler methods of heating by the use of hot water is by the two-pipe open tank system, which consists in conducting the flow of hot

water from the boiler to the radiators in one (or more) main lines, with the various branches and risers and then conducting the water from the radiator back to the boiler in various return lines.

Not every steam fitter is a good hot water fitter. Regarding the "pitch" of hot water pipes, it may be said that it should be one in ten when it is possible to get that amount and that in the two-pipe system the rise should be away from the boiler. That is the lines should be higher at the farther end than they are at the point where they connect to the boiler. In the one main hot water system the same point does not obtain, for the main can rise, or fall as it leaves the boiler according to the necessities of the occasion. Many fitters do not believe this, but it is mainly because they have never tried it out. The water will circulate in the system just the same, only the pitch on the branches must be on the rise as regards the position of the boiler. This statement is based on experience and is not guess work.

Hot water heating has been modified and changed in various ways, one of which may be mentioned as the hot water pressure system for the individual houses, blocks and stores. In such systems a simple piece of apparatus is connected to the heating plant and acquires a pressure of from ten to fifteen pounds additional for the system upon which it is used.

That may be a rather queer manner of expressing the process of the invention, but it will be seen, upon consideration, that it is an entirely fair description. Another means of heating, with either steam or hot water, is to make use of what is called the indirect radiation. Properly speaking this is a different method of delivering the heat, rather than a different system. Indirects are generally of a different form from the ordinary radiator and are mostly suspended from the basement ceiling and are boxed in, having ducts leading the air from the outside to the boxed in indirect whence it passes over (rather between) the sections and then through the register, or possibly another flue and then into the room that it was designed to heat. The register may be

placed in the floor or the wall at the side of the room. When placed in the floor the dirt will be swept into the radiator no matter how much care may be used and the radiator thus becomes anything but a thing of joy. To the more modern fitter it (the register in the floor) looks like a most unsanitary mode of proceeding.

The flues leading into the indirect may be constructed of wood or of galvanized iron with a strong preference for the latter. Residence heating by the use of steam or hot water is yet in its infancy. Until the last few years the coal stove and the hot air furnace have held full sway. The ease and effectiveness with which these agents, steam and hot water, accomplish their purpose, when rightly installed, combined with the small cost of their upkeep and expense for daily operation and the comparatively moderate cost is so educating the public that the use of the apparatus is not limited to the richer classes as was the case in former years.

There are, however, great possibilities

along the line of small residence heating; jobs having from four to ten radiators hooked up to some small but effective steam or hot water boiler. Thousands of homes all over the country know not the comforts of the mentioned form of heating and from this class of people the master fitter can yet derive an immense amount of business at a handsome profit in the aggregate and instead of making a desperate effort to cop out the big work, much of which turns out to show a direct loss, a mighty good policy would be to make a specialty of the small work and use the spare time in nailing enough small contracts to keep the wheels turning for the greater portion of the year. You do not need to wait for building operations. Go after some of the old-time residences and the people who have skinned along for years with coal stoves. There are plenty of them in your town and they have got the "boodle" to buy the goods, provided that you have the ability to make the sale.

was discussed. It was decided to make an appropriation for that purpose.

ADD HOW MUCH?

Editor Plumber and Steamfitter,—Can you, or some of those who read the paper, tell me just the amount of radiation the water front will carry extra and still keep the water in the range boiler hot enough for use?

London, Jan. 9.

Z. M.

We have seen it given somewhere that one foot of radiation may be used additional, for each gallon of water that the boiler holds. In other words to a forty gallon range boiler (if working right) forty feet of radiation might be added. We would very much like to get the experiences of some of our readers who have made installations of this nature, for it seems to us that the estimate given, under some conditions might fail.—D. C. H.

SCARCITY OF JOURNEYMEN.

Every dealer who has tried to secure competent plumbers and steamfitters within recent years, knows that it is not an easy task. Perhaps he wonders why this should be so, when plumbing to-day offers better wages than it ever has in the past.

But the same story is told in almost every trade, and this state of affairs is no doubt due to the downfall of the apprentice system. Young men are no longer willing to undergo three or four years of preliminary training at a low rate of pay, before entering upon the dignity of journeymen.

The lack of good journeymen is already handicapping many employers, and, unless the tendency is checked, it will, before long, become a serious menace to the trade.

A remedy is already being provided. The Canadian Government, recognizing that the apprentice system is on the decline, has taken up the subject of technical education and appointed a Royal Commission to investigate the situation and frame a report. This will eventually result in a national system for educating tradesmen for our various industries.

The Commission has already held sittings in a number of important centres, and they will no doubt continue them until all the interested trades are thoroughly canvassed. It would be a good thing for the tinmiths and plumbers in every locality to get together previous to the sitting of the Commission, and arrange to present their case jointly. If courses in tinmithing, plumbing and the allied trades are incorporated in the technical education scheme, it will solve a problem that is becoming acute.

Annual Meeting of Toronto Association

Officers Elected for the Year and Plans Laid for an Aggressive Campaign—Estimate Sheets are to be Drawn Up and Printed.

Toronto, Jan. 13.—The first annual meeting of the Master Plumbers' Association of Toronto, was held last night. The large attendance augurs well for the continued growth and success of the association. During the past year the membership has been steadily increased until to-day it numbers over one hundred, but the officers have set for themselves the task of enrolling all the remaining master plumbers of the city.

The election of officers resulted in the re-appointment by acclamation of a number of the old officials and the elevation of several new men, all of whom have during the year been actively and earnestly striving to forward the interests of the association. The list of officers as it now stands is a strong one.

President—Geo. H. Cooper.

First Vice.—Frank Maxwell.

Second Vice.—D. Glynn.

Secretary.—G. F. Frankland.

Treasurer—T. Maxwell.

The re-election of President Cooper was a sign that his earnest work of the past year and his unremitting efforts of many previous years, has been appreciated. First vice-president Maxwell has been one of the most able members and the same can be said for the new secretary, Mr. Frankland. D. Glynn and T. Maxwell are fully capable of per-

forming the duties of their respective offices. A. F. Passmore was re-elected as chairman of reception committee, his



Geo. H. Cooper, re-elected President of Toronto Master Plumbers' Ass'n.

fitness for this post having been amply demonstrated during the past season.

Estimate Sheets.

Among other matters of business, the question of getting out estimate sheets,

The Plumbing System in a Modern Hotel

Description of the Work Done on the New Blackstone, Chicago, One of the Most Up-to-date Hotels Ever Constructed—Originality was Displayed in Many Details of the Plumbing.

The Blackstone Hotel, Chicago, is decreed to be one of the most complete buildings ever constructed. In architectural beauty and engineering achievement it stands as a model of hotel construction and represents an investment of approximately \$3,000,000. It is twenty-two stories in height and rises 250 feet above the sidewalk.

The architecture is of the period of Louis XVI., the exterior being of pink granite, white terra cotta and red pressed brick. The interior is not only furnished in perfect taste, being rich with imported marbles, tapestries and fine woods, but it combines with its aesthetic features the highest possible comfort for the guests. The lighting fixtures alone cost \$40,000 and the furniture over \$100,000.

The plumbing was installed by Deggan, of Chicago. The acme of comfort, convenience and beauty has been reached in the bathrooms, of which there are about 330. The floors and wainscoting are tile, the latter of which is white glazed tile to a height of 3 ft. 6 inches. The floors are in $\frac{3}{4}$ -inch split joint ceramic. Another feature, which demonstrates the care and study that has been given for the comfort and convenience of the guest, is the medicine cabinet which has been placed in each bathroom. This cabinet is of mahogany and is provided with sliding rods, which makes it possible to shift a light attached on either side to any position.

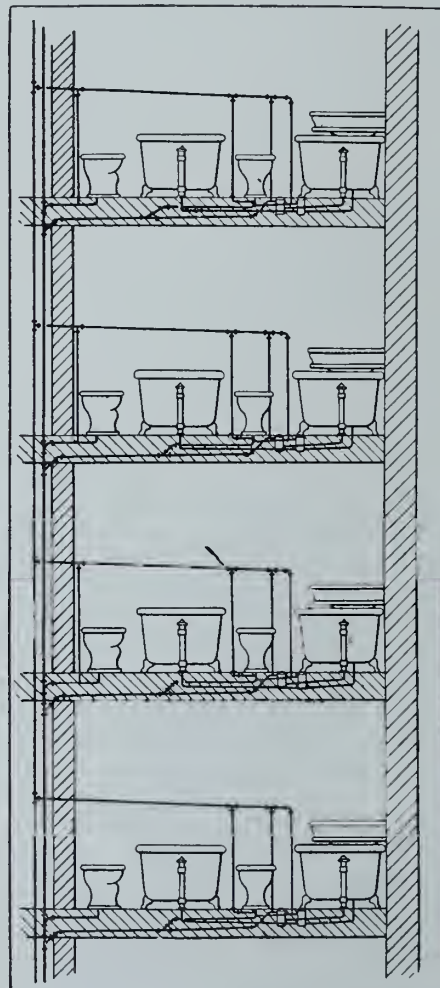
The Drainage System.

The piping systems throughout are of the highest type. A sub-drainage system is provided under the low, level basement floor, connecting into settling catch basin and from this into the ejector. This sub-drainage system drains the sub-soil, together with all pits, the gutters, adjoining retaining and curb walls, and the pipe ducts under the basement floor. This sub-drainage system is laid with Akron bell-jointed pipe. There is also a floor-drainage system, using cast-iron pipe, which will drain the bell traps, taking the drainage water from the basement floor.

The ash tunnel and the shipping platform, communicating with the Illinois tunnel, are each provided with a separate drainage system. The ash tunnel drains into a sump at one end, which is emptied by a steam syphon. The tunnel shipping platform is provided with an independent sub-drainage system around the enclosing wall connecting into a cast-iron catch basin in

which is placed a steam syphon, which discharges this water into the basement sub-drainage system.

A separate drainage system, using light cast-iron pipe, runs around underneath the basement floor into which is connected the soil and waste pipes, draining the fixtures from the store level at grade to basement floor inclusive. All these low level systems are discharged by the use of Shone hydro-pneumatic ejectors.



Elevation of stack, serving bathroom and toilet room.

The soil and waste stacks draining fixtures above sidewalk grade discharge direct into the street sewer through a sewer system suspended on the basement ceiling, which in turn connects into three sewer stubs. Downspouts and ejectors discharge directly into these stubs independent of all other drainage. Sewer branches from the stubs, which drain fixtures with a water head of less than thirty-five feet above the sewer

stub, are protected with back water gates. All drainage systems, excepting the sub-soil drainage, are of cast-iron pipe, where underground; elsewhere, of wrought iron pipe.

The water supply is through a 6-inch service line connecting with Hubbard Place front, close to Michigan avenue, and carried back behind the furring wall, then to two 4-inch meters, and from there to the surge tank.

Under Three Pressures.

The water-distributing system is under three pressures—a city pressure system, which supplies all fixtures from the stores at side walk grade to sub-basement inclusive; a medium pressure system (100 lbs. pressure), which supplies all fixtures from lobby level to ninth floor inclusive, using pneumatic house-tank distribution, with tanks and pumps located in basement and with a main carried around on basement ceiling and risers carried up through the building to the limit of service; a high-pressure system (200 lbs. pressure), supplying all fixtures from the tenth floor to roof inclusive, consisting of house tanks located in the penthouse, taking their supply from pump located in basement, with distribution main carried around in the twentieth floor with risers taken off and distributed throughout the building to supply the fixtures which this system serves. There are two hot water systems—a medium pressure system, corresponding to the medium pressure system of cold water supply, which supplies hot water to all the fixtures from the ninth floor to the basement inclusive, and a high pressure cold water system, which supplies all fixtures from the tenth floor to the top inclusive.

Stand-Pipe System.

A stand-pipe system is extended from steamer connections on Hubbard Place to tank-header in penthouse, with supply connection to the house pump headers and with valves, branches, hose racks and hose and nozzles complete for an opening on each floor at both ends of the building.

All pumps throughout the building, eighteen in number, have a capacity of 150 gallons per minute and a piston speed of 30 feet per minute. All water is filtered through "International" quartz filters, and the drinking water below the fourth floor is cooled and circulated.

Originality Was Sought.

In consideration of the plumbing fixtures, especially those for use in the bathrooms, the end sought was originality, each piece being designed to conform to the general scheme of architecture and using only the highest quality of materials in their construction. These fixtures were all manufactured by the L. Wolff Manufacturing Co., Chicago, Ill.

The bathtubs in all of the larger guests' bathrooms are Wolff's H-6075 or H-6010, as shown on the plans, class A porcelain bathtubs glazed inside and on the rim and base outside. Panels of tubs on the outside were painted two coats of white lead paint and one coat of white enamel after being set in place. Each tub is fitted with $\frac{3}{4}$ -inch extra heavy pattern compression valves with

In general toilet room on basement mezzanine, the "Wotometer" valves are concealed in the wall or in spaces at the back of closets and are operated by extended nickel-plated levers with china handles. The bowls in this toilet room are also fitted with vitreous local vent-wall extension.

The lavatories in the guests' bathrooms are Wolff's china vitreous pedestal lavatories, the "Colonial," size 30 inches or 33 inches. Each lavatory is fitted with nickel-plated compression

"Connecto" supply and "Knox" waste with solid china indexed handles, brass nickel-plated $1\frac{1}{2}$ -inch iron pipe size "P" trap with brass nickel-plated iron pipe size $1\frac{1}{2}$ -inch waste to wall; $\frac{3}{4}$ -inch H-5165 supply pipes and stop valves, shampoo connection and sprinkler. The soap cups are moulded in ware. Six feet of non-breakable hose with nickel-plated hand spray, rubber guard and side handle is supplied at each lavatory. All escutcheons are china.

Past Year Established Building Records.

Activity Was Manifested in All Parts of the Country—Western Cities Showed Practically Large Advances in Building Statistics.

The year just closed has been, generally speaking, the most satisfactory one in the history of real estate operations throughout Canada. Those most directly benefited are in the western country, where values are advancing so rapidly. From all the large centres of the West come reports of a successful year's operations. Prices have been for the most part firm, with a tendency to a gradual increase. In numberless cases the same property has turned over many times, each time at a profit.

The comparative building returns for December and for the whole year, are given below. Prince Albert leads with a percentage gain of 370.70 per cent. Although Regina records a gain of 215.80 per cent., advice is given by the building inspector that the figures

given do not include the Parliament buildings, which, if included, would bring the figures up to \$3,840,965. Edmonton shows an increase of 1.45 per cent., which is favorable, since the plasterers' strike tied everything up for a considerable time. It is estimated that a million dollars will be spent in the erection of business blocks in 1910. The McAuley street school, to cost \$100,000, is also to be erected this year. Fort William's figures for the year were \$2,381,125.00, a decrease of 19.83 per cent. In explaining this, the building inspector has stated that elevator construction, which amounted to one and a half millions in 1909, was practically cut out this year. There has been a good increase, however, in factories, business blocks and warehouses. The building returns follow:

	Dec. 1910	Dec. 1909	Year 1910	Year 1909	Increase for Year	Per Cent
Hamilton	\$ 49,550	\$ 69,300	\$ 2,604,605	\$ 1,623,100	\$ 981,505	60.47
Montreal	856,800	166,885	15,815,859	7,785,621	8,030,238	103.14
Kingston	495	No record	220,092	452,695	*232,603	51.39
Prince Albert	3,000	4,680	667,475	141,810	525,665	370.70
St. Thomas	10,150	5,700	286,650	261,600	25,050	9.57
London	63,085	32,155	805,074	850,134	*45,060	5.30
Moose Jaw	25,000		1,060,290	497,440	562,850	113.16
Winnipeg	970,250	33,425	15,106,450	9,226,825	5,879,625	63.72
Ottawa	194,350	104,125	3,040,900	4,527,590	*1,486,690	33.05
Regina	20,625	9,025	2,350,965	744,479	1,606,486	215.80
Fort William	404,135	247,800	2,381,125	2,970,365	*589,240	19.83
Calgary	354,300	151,550	5,589,594	2,420,450	3,169,144	130.93
Halifax	18,770	33,550	471,140	630,379	*159,239	25.26
Sydney, N. S.	12,800	7,700	347,554	160,470	187,084	116.63
Toronto	1,353,265	1,593,365	21,127,783	18,139,247	2,988,536	16.47
Saskatoon	6,600	No record	2,646,496	1,002,055	1,644,441	164.11
Edmonton	141,321	9,780	2,159,106	2,128,166	30,940	1.45
Lethbridge			1,160,985	1,268,215	*107,230	8.45
Vancouver	958,775	567,609	13,350,365	7,258,565	5,891,800	81.17
Victoria	129,800	71,700	2,271,095	1,073,420	597,675	35.71
Port Arthur	76,800		1,062,616	584,810	477,806	81.70
Brantford	61,500	121,800	681,030	430,335	241,695	55.61
Total	\$5,713,371	\$3,230,149	\$95,007,249	\$64,786,771	\$30,220,478	46.64
* Decrease.						

ASSOCIATION NOTES.

The question of enlarging the membership and widening the scope of the National Association of Master Plumbers and Steamfitters, is occupying the minds of the officers and promises to loom up for settlement at an early date. A meeting of the executive has

been called for next week when this, and other matters of importance, will come up.

President Cooper and Secretary Legrow have been considering a scheme to increase membership by advertising, which may be worked out in the near future.



Fittings in guest room at the new Blackstone Hotel.

stuffing box, $\frac{3}{4}$ -inch iron pipe size brass supply pipes to floor with $\frac{3}{4}$ -inch extra heavy pattern compression wheel handled stop valves and rough brass Ideal waste. The valves and wastes are carried in a cast-iron frame independent of other fastenings. The valves and wastes have solid china indexed handles with nickel-plated stems and porcelain escutcheons. Each tub measures 24 inches wide by 19 inches deep on the inside. Soap cups are moulded in the rim of tubs at the head and next to the wall.

Some Criticisms of Plumbers' Advertising

Numbers of the Trade Do Not Advertise as Much as They Might With Profit to Themselves—The Good and Bad Points of Ads. Selected From Papers in Different Sections of the Country.

The plumber has as much reason to advertise as a man in any other branch of mercantile trade. He has goods to sell and service to offer. The competition he encounters is keen. The public, moreover, requires just as much direct instruction in the matter of installing "quality" plumbing as in the choice of clothing and the purchase of groceries. The plumber can by advertising get a larger share of the trade that is going and, in addition, create new business.

Although plumbers have not in the past gone in for advertising, except to an almost inconsiderable extent and are not at present paying as much attention to this department as the possibilities warrant, still there is a marked improvement in this respect. Enterprising master plumbers are beginning to use newspaper space and are reaping the benefit of their progressiveness. Hardly a paper is published but contains the ad. of at least one plumber. On the whole, the quality of plumbing ads, is quite good. The reading matter is made terse and reasonably "catchy." The wisdom of using illustrations is realized by most and some very apt ones are to be found. Of course so busy a man as the plumber usually is, cannot be expected to produce reading matter with the forceful directness and finished polish of the professional ad. writer and in the samples produced below, excellent though most of them are, some of the common faults are revealed.

Specialty Ads.

Two of the ads reproduced are "specialty ads"—that is, they apply to some line carried that is rather out of the ordinary in that particular business. A specialty advertisement is generally forceful and effective. In the first place it allows the writer to concentrate on one article, to give up all space to it and to expatiate on its merits without introducing other matter to divide the interest. It is generally wiser to particularize than to speak in general terms. Everyone knows that a plumber carries baths and sinks and, to devote advertising space to a mere recital of lines handled, is not telling the public anything that it did not know before.

That of Stevenson & Malcolm Co., Guelph, is devoted to gas stoves. The idea contained in this ad. is a good one but the arrangement is not all that it might have been. The illustration would have been improved if the heavy-

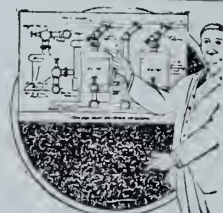
lined background and checker-board floor had been eliminated, allowing the range itself to stand out clear and distinct. A heading in larger type "No worry or work with a gas stove," or something to that effect would have improved the "eye catching" qualities of the ad.

The Geo. E. B. Grinyer Co., also of Guelph, have specialized in their ad. on electrical fixtures. The illustration is well designed and the reading matter well to the point, but the idea would have been brought out better if a heading had been introduced, applicable to the illustration "Inspect our stock" would have created a more direct connection between picture and reading

At this time of year, a plumber has a great deal of jobbing work to do. Cold weather causes pipes to freeze and burst and the services of the plumber are frequently required in very much of a hurry. A seasonable ad. would therefore be a business getter at the present time.

A very good sample of an advertisement of this nature is the second one of the Colbert Plumbing and Heating Co., Victoria, B.C. Advertising experts disagree on the question of using comedy cuts, but in the present instance, the illustration appears to serve a useful purpose. It is calculated to catch the eye and arrest the attention. The reading matter brings out the points of the ad. well.

The other ad. of the Colbert Co. contains an illustration of some merit. It is a straightforward ad., the proposition being well told. Altogether, good use had been made of small space.



We are always pleased to explain the advantages of a job of

Hot Water or Steam Heating

We are particularly proud of our work in this line and shall be glad to show you if you are interested.

The COLBERT
Plumbing & Heating Co., Ltd.
755 Broughton St. Phone 652



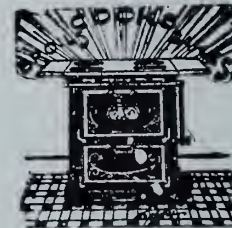
We are going to make the good people of Guelph sit up and take notice, by giving them better value for less money than they ever heard of before. Our Electric Fixtures lead the way for price and quality, and if we can't satisfy you, nobody can. Come and inspect what we have to offer before purchasing, you won't be disappointed.

Geo. E. B. Grinyer & Co
Plumbers and Electricians.
26 West Market Square.
Phones 605 and 607



we know our business, and if you want satisfactory work, call on us. We make a specialty of fine sanitary plumbing, and yield to none for skill in that line. Have made a reputation and sustain it. Estimates furnished, and jobbing promptly executed. Prices very reasonable, too. You'll find us reliable; our work first class, and our charges right.

BOYLE & SON.



EVERYTHING that the disagreeable coal stove can do the gas stove will do much better. No fuss or bother to start one of these

GAS STOVES

and no trouble to keep it going. Turn the valve, strike a match and it is ready.

Less waste of nutritious juices when meat is roasted in a gas stove. Less waste of money when a gas stove is used for all purposes.

Stevenson & Malcolm Co
Plumbers and Electricians.
6 Wyndham St. Phone 143

Plumbing and Heating

When visitors come isn't it gratifying to have your bathroom equipped that it may win the approving glance of every critical eye? Our enameled fixtures make your bathroom modern and a room to be admired. When you place your plumbing order with us you are assured of high grade work and prompt service.

Hamilton & Stott



YOUR CALL FOR HELP

Will be answered at once if you 'phone when your water pipes burst or something else happens.

WE'LL FIX THE PLUMBING

So that it will stay fixed until entirely worn out or you wish to change it for more modern service. Then call on us again.

The Colbert
Plumbing and Heating Co., Ltd.
Phone 552.
755 BROUGHTON STREET.

FINE PLUMBING FIXTURES

WE CARRY IN STOCK
Porcelain Lined Baths,
Lavatories and Sinks,
Laundry Tubs, Etc.
THE FINEST GOODS MADE

DUPLEX AND ALL STEEL BATHS

High and Low Closet Combinations, Range Boilers, Cement Laundry Tubs, Etc., Etc. Everything that is necessary for good Plumbing.

Prices cheerfully furnished on application.

J. S. Mitchell & Co.

Boyle & Son, Napanee, have an ad. that is out of the ordinary by reason of the cut, which unfortunately does not show up to best advantage owing to defective press work. The reading matter would have been better if it had been arranged with an eye to display. The illustration is large for the space and the writer would have made a more effective ad. by saying less and thus making allowance for arrangement.

Hamilton & Stott, St. Thomas, have a very good little ad. They make a direct appeal, couched in convincing terms.

J. S. Mitchell & Co., Sherbrooke, have fallen into the error of giving a

The Western Plumbing Co. LIMITED

BOX 417 NEXT DOOR TO EUREKA PHONE 1143

CONTRACTORS

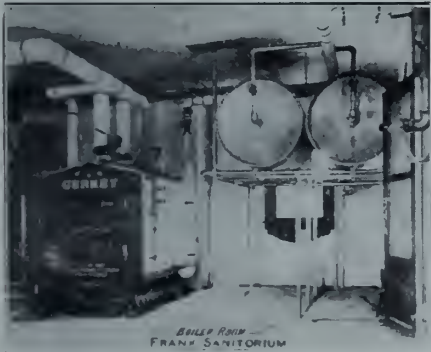
For High-Grade
Plumbing and Heating

—At Fair Prices—

The year is gone and we are proud of our record. Our customers are satisfied, and we look forward to a prosperous new year.

Here is a cut of one of our jobs:

Frank Sanatorium



A few more of our jobs which we invite you to inspect:

New Galt Hospital, New Presbyterian Church, New Bank of Commerce, Alexandra Hotel, Sherlock Block, Victoria Mansions, School Building, Taber, Hotel Redcliff, Hotel Champlain, etc. etc.

list of the goods that they carry, rather than specializing on any one article or giving one particular line of talk.

The Western Plumbing Co., Lethbridge, have an effective double-column ad. The matter is good, but the arrangement might have been improved. The name of the company would have shown just as prominently at the bottom of the ad. and the top could thus have been utilized for a leading sentence calling attention to the illustration. The illustration is in itself good advertising and the list of contracts appended is a good idea. It lets the public see that big contracts have been done and establishes the company high in the estimation of the reader.

Work is Started in New Toronto Factory

First Stock Produced in Plant of Standard Sanitary Manufacturing Co., Toronto, First of December — A Sketch of James A. Riordan, Vice-President and General Manager.

Around the first of December the factory of the Standard Sanitary Manufacturing Company, Toronto, was operated for the first time. Although the buildings at that time were not completed, operations were begun in a limited way in some departments. As the construction has progressed, the scope of the manufacturing work has been gradually enlarged since. The first goods turned out in the factory were rolled-rim enamelware sinks but other goods have since been produced. It is expected that the plant will be completed by February and will be in full working order by that time. The total number of hands employed then will be in the neighborhood of 750.

The site of the plant at Lansdowne avenue and Royce street, was selected in 1909 and the ground was broken in November of that year. Work progressed through the following winter months and in June of last year James A. Riordan, the newly-elected vice-president of the Canadian branch of the Standard Sanitary Company, came to Toronto as general manager. He at once assumed personal superintendence of the building operations and, as a result of his energetic direction, good progress was made, making possible the start in stock production the first of last month.

The General Manager.

James A. Riordan was born in Ireland in 1863 and came to America with his parents when four years old. The family settled in Ontario County, New York, and there he remained until he was 16 years of age. At that time, he decided to begin the battle of life on his own account and struck out accordingly, for Northern Michigan, where the vicissitudes of fortune led him to the logging camps. After some years' experience of that rough and ready life, he struck farther west, going to Chicago. As a traveler for C. Sidney Sheppard of Chicago, he began to show ample evidences of the ability which have finally landed him high in his chosen sphere. From Chicago he went to St. Louis, where he started as manufacturers' agent, handling the products of the Dawes & Myler Co., New Brighton, Pa. In 1896, he was appointed traveling representative for Dawes & Myler, holding that position until 1900 when the firm was consolidated with the Standard Sanitary Manufacturing Company. He was then appointed man-

ager of the St. Louis office and covered the entire Pacific coast, calling on jobbers only. His appointment to the general managership of the Canadian branch is a recognition of the splendid work he has done for the company in his previous capacity.

AN ELECTRIC HEATER.

An electric lavatory heater, intended for use in houses having no hot-water supply system continuously, is shown in the accompanying illustration. As will be noted, it is designed so that it can be mounted on a lavatory and may be placed in a corner so as not to interfere with the free use of the bowl. The heating element to which the electric



connections are made are enclosed in the nickel-plated casing shown. The heater is connected to the supply as shown and as the water passes through the coil in contact with the heating element it becomes heated and flows from the spigot shown. A regulating device is provided, so that any temperature may be obtained from lukewarm to that within the capacity of the heater.

A permit has been issued to the Imperial Life Assurance Company, for an eight-storey brick and steel building, Toronto, to cost \$180,000.



The Question Box



Subscribers are Urged to Send Questions to be Answered, or to Comment on Letters Published. Descriptions of Jobs Done or Shop Kinks are Also Invited.

USING MORE MODERN METHODS.

Editor Plumber and Steamfitter,—Can you tell me about how much I could get a second-hand typewriter for and about how long it would take me to learn to use it in my business? Have any of your readers ever done so?

St. Thomas, Jan. 4. P.F.

We suppose that you can obtain a second-hand machine for about any price, depending of course somewhat upon the make and condition of the machine. We would venture to say, that if you do not care to invest too heavily at the start, that you should obtain a fairly good machine for about \$20.00 or \$25.00 and that it would last you for some time. As to learning to operate the machine it is really a very simple matter and you ought to be able to put out a good business letter in about a week's time. We do not mean to say that you will write very swiftly with only that amount of practice, but if you stick to it for an hour or so every day for a month you will be surprised to find that you can turn out more letters in an hour on the machine than you can do in the same amount of time using the pen and ink. The most important matter to be considered is to teach yourself to think upon the machine. Begin to do this from the very start. It will, when you have acquired the art, save the time that you would use in drawing up your thoughts in longhand and then transferring the article or letter to the typewritten copy. In this way, a very moderate performer upon the typewriter can turn out nearly as much work in a given period as a very good stenographer. As to how many of our readers have made use of the typewriter, for themselves in business, we are unable to say. Our columns are always open, however, and we are willing to print their communications.—D.C.H.

BUSINESS STATIONERY.

Editor Plumber and Steamfitter,—I am about to get out some new business stationery for the coming year and would be glad of any suggestions that you would see fit to make. Trusting to see it in the paper at an early date. Yours truly,

Brandon, Jan. 12.

J.K.L.

In the first place avoid making it look flashy, or as if you were afraid that you would not get the worth of your money from the printer. Many letter heads that we have seen have been loaded down with pictures and the history of the firm from the dawn of day. We would not say "estimates cheerfully furnished." If you feel as if the business would go to ruin if that phrase were not on the letter head put it like this; "estimates furnished" or "estimates furnished promptly." Most people know that the plumber is dead willing to figure the work, so what's the use of telling them something to which they are already wise? Would not "Bathroom Specialties" on the letter head look more to the point? To our notion, simplicity, should be the key note to the letter head. We believe that we would save a few points to tell the customer verbally and not try and get it all on the letter head. There are thoughts in connection, but we will not give them all at this time as we would prefer to hear from some of our readers.—D.C.H.

THE PROOF OF THE PUDDING.

Editor Plumber and Steamfitter,—The other day I had a fellow come to me and he wanted about a dozen new air valves for his job. Now he had on a cheap grade of valve and I tried to get him to buy something better. No use. He was set for the cheaper goods. How would you have gone at this party in order to make the sale of the better goods? Please answer soon.

Toronto, Dec. 28.

N. N. M.

There are some people that can be won by talk while others always have to be "shown." Granting that you are a fairly good talker it becomes evident that you were up against one of the latter kind of "humans." We believe that, as soon as we had discovered that the party could not be convinced with words, that we should have picked out a dozen of the very best working make of air valves that we had in the stock and then asked the party to show us the job. We would have put on those valves and said to him, "now you use these valves for a week or so and see the relief that you will experience from having a reputable valve on the job in-

stead of the kind that you have been using. Then come in and tell us what you think of the matter." This line of selling might fail once in a while, but we believe that it would succeed in nine cases out of ten.—D. C. H.

HOW MUCH WATER NEEDED?

Editor Plumber and Steamfitter,—Can you give me any rule or table of the amount of water that will flow through a pipe? How much do they figure that the average house will use per day?

T. J.

Montreal, Jan. 11.

It has been estimated that, in a private residence, about 25 gallons will be used each day, for each person. As far as publishing tables is concerned we could publish several, but they are mostly at certain pressures or at certain velocities of flow and therefore probably would not assist you very much. Why not find out for yourself? It is not a difficult thing to do. You can read the water meter for a certain length of time and find out just how many gallons have run through the pipe for that length of time. Now you know the size of the pipe through which the water ran. You can find out, in some of the catalogues the area of the various sizes of pipes, and, starting with the size that you have already found out about, you can easily find out how much water will (from the water system you are using) flow through the various sizes of pipes. You probably know the number of people that are to occupy the house or building, and so will be able to make a very close estimate from the foregoing knowledge. If you do not happen to have a water meter, you can open up a faucet and measure into pails the amount of water that runs out for any given length of time. We believe that the suggestions given will be more helpful than any tables that we could publish and submit the same for the benefit of the readers.—D. C. H.

The English owners of the Five Sisters' Block, Victoria, B.C., are considering plans to replace the present building. The idea is to erect a steel and reinforced concrete structure of six or eight storeys, to cost about \$400,000.

Attention Must be Given to New Department

If a Plumber Desires to Make a Success of Selling Lighting Fixtures, He Must be Prepared to Look After the Line Properly—Two Practical Instances Quoted—The Tendency to Carry Fixtures Becoming a General One.

"I have carried lighting fixtures and an electrical department now for over a year," said a Toronto plumber, the other day.

"It hasn't lost me any money," he continued, "but I don't know that I have made much out of it. The electrical department I have found about the same. Every contract for wiring we have had so far has paid but we haven't had enough of them."

He spoke in a careless, free-and-easy way. A glance around his shop revealed the fact that the same attributes might be applied to his business methods. In the same glance could be learned the reason why his lighting department had only just made expenses for him.

The lighting fixtures were soiled and covered thick with dust. They had lost their original brightness. Cobwebs actually decorated a few of them. They had been arranged in the first place in a very haphazard way, with no eye to appearances. That they had not been dusted or cleaned since their installation was only too apparent.

The proprietor of that shop was lucky in having broken even. The wonder was that he had sold any fixtures at all. A few questions served to throw further light on the subject of his lack of success.

"When you are figuring on a plumbing job, do you speak to the owner about getting his lighting fixtures from you?"

"Oh, yes—sometimes. But to tell you the truth, I don't know much about this lighting business. I have a young fellow to look after my books and he always attends to customers who come in to look at fixtures."

A few odd hours devoted to going over his stock, to studying up the fixture question, would have fitted him up with sufficient knowledge to intelligently further his interests in that direction. Rather than go to that trouble, he was losing opportunities daily to turn over neat profits in connection with many of his plumbing contracts. He was letting his book-keeper handle what business "happened" to come their way. It is morally certain that the young book-keeper will never be so hurdened with demands from that source that he will not have ample time for his ledger.

The Right Method.

In the same vicinity was another plumbing establishment. The proprietor

had gone into the lighting line only six months or so before but the size of the stock he carried was a sure guarantee of the business he had worked up. His window literally shone with its display of highly polished bathroom fittings and bright brass lighting fixtures. Inside, the store was neatly laid out, despite the fact that the space was none too great for the stock carried. The walls were clean and the floor was almost as highly polished as the goods displayed on it. There were no unsightly piles of scrap pipe and odd fittings in corners of the store. Neatness and bustle were the uppermost characteristics of the establishment.

"The lighting business pay?" said the proprietor, in answer to a query. "Ra-



One of the Latest Designs—Inverted Gas Burners are Rapidly Coming Into General Use.

ther. I have worked up a good connection already and am looking for greater things in the future."

This plumber had taken up gas and electric fixtures in a whole-hearted way. He had worked the new department in conjunction with his plumbing business and had landed many contracts jointly. The demand had grown so rapidly that his stock of fixtures had necessarily been enlarged until it had reached unusual proportions for a plumbing establishment. Still, it was being turned over rapidly.

"The financial returns for the business have been largely increased," declared the proprietor, "and I cannot see where

my overhead expenses have been any larger. I am considering now, however, the hiring of a couple of electricians to handle contract work for me. There is enough work in sight to justify me in taking the step, I think."

Attention is Demanded.

It is the same in this as in everything else. If a plumber decides to go into the fixture trade, he must be prepared to give some time and attention to it. If he enters the trade with his eyes open to the possibilities of it, a good profit is there for him. If, however, he neglects the new department, it is likely to prove an incubus rather than a profit maker.

Insight is Required.

To properly handle lighting fixtures, a plumber must acquire considerable knowledge of the subject. He must know something of the qualities of different kinds of lights and globes. He must have a certain insight into electrical matters and be able to advise in the selection of proper fixtures for different rooms in a house in order to have them harmonize. It should not be difficult, however, for any plumber to pick up all that is required. Most men in the trade are sufficiently versed in such matters to confidently enter the new line.

Becoming a Staple.

The strongest reason that could at present be brought forward to induce plumbers to handle lighting goods, is that the tendency to take the line up is becoming more marked every day. A large proportion of plumbers carry fixtures now. A fair conclusion to draw is that the time is not far off when it will be recognized as a regular branch of the plumbing trade. The sooner a man gets into it, then, the better it will be for himself in the long run.

COOK-STOVE VERSUS SEWER.

It was a hot evening following a regular scorcher of a day, and Casey and the family were sitting out on the front porch trying to keep cool.

"Sure, t'was an awful day in the kitchen," said Mrs. Casey.

"I have t' smile when I hear ye complain' about the heat, for, as a matther iv fact, ye don't know what heat is," said Casey.

"Oh, I don't know," said Mrs. Casey. "Sure I'd change places with you any day, for while I'm workin' over a hot cook-stove all day I'm thinkin' iv th' fine picnic you're havin' workin' down there in that nice cool sewer."—National Monthly.

J. J. Turner & Sons, Peterboro, will enlarge their factory.



Martin & Tremblay, plumbers, Montreal, have assigned.

Berthiume & Campeau, plumbers, Montreal, have dissolved.

J. T. Begbe is opening a plumbing business at Chilliwack, B.C.

The Engineers' and Plumbers' Supply Co., of Regina, have been incorporated.

The employes of the plumbing and heating department of the Sumner Co., Moncton, N. B., presented the foreman, G. S. Dorman, with a set of carvers.

L. H. Estano, of Moncton, have sent out an attractive calendar in the form of a picture of a seaport, with numerous sailing ships in the offing.

The salary of the plumbing inspector at Halifax was increased by the council \$50 per annum. A motion to make the increase \$100 was just defeated.

Dr. Hastings, M.H.O., Toronto, has looked into the matter of inspection of gas fixtures, in view of the many recent cases of asphyxiation that have occurred but finds the city has no jurisdiction in the matter at all. He is of opinion that his department should have authority to inspect gas fixtures.

Harry Mahoney was re-elected to the city council at Guelph. His record last year as chairman of the public works committee was good and he was returned by a large vote. A despatch from Guelph reads:—"A writ has been issued against Ald. Harry Mahoney by Matthew Dobson, former road foreman. This action is for libel and the claim is for \$500 damages.

Plumbers' Union, local 71, Ottawa, have elected the following officers for the ensuing year:—Pres., W. Kennedy; vice-president, Ed. Smith; financial secretary, S. Doughty; recording secretary, H. Watkinson; treasurer, H. Lee; inside sentry, J. Grouchy; executive board, J. Barrett, J. Smith, J. Pollock, E. Smith, B. Stevenson, V. Quinn; financial committee, J. Cinq Mars, J. Barrett, J. Smith.

Robert M. Yeomans, a Toronto master plumber, was elected as alderman for ward 3. He has since been actively to introduced a motion to abolish all com-

mittees of the council and refer their duties to the board of control. The World applauds the idea as "the wisest and most practical reform suggested in the city council since the board of control was established." That's pretty good for a new hand.

Norman Goudy, who has been in charge of the sales and advertising departments of the Galt Art Metal Co., has left that firm to enter the sales force of Steel and Radiation, Limited. Western Ontario will be his territory and, as he has a wide experience among the architects and contractors, he should make a success of his new duties. Mr. Goudy is carrying a handsome traveling bag, which was presented to him by the office staff of the Galt Art Metal Co.

Wm. Bush was appointed plumbing inspector in Toronto to fill the vacancy created by the elevation of Inspector Meadows to the post of supervisor. The appointment of a supervisor of inspectors has worked out well so far, although it has been in operation for a couple of weeks only. A number of matters have been carried up to the supervisor for adjudication, with satisfactory results. Mr. Bush has been a master plumber for some years, prior to which he was a journeyman and member of local No. 46.

Dr. Hastings, Medical Health Officer, Toronto, has issued a circular to all the plumbers and builders in the city, notifying them that from to-day all plumbing and sanitary work must stand the "smoke test" before the inspectors will pass the work. The department has had the power to enforce this test for some years, but for some reason has failed to do so. Over 5,000 permits were issued last year, but in only 595 cases was the smoke test applied. The inspectors were of the opinion that as long as the work stood the water test it was satisfactory. Henceforth both tests will be applied.

Quite a situation developed in Lethbridge, Alta., as the result of the employment of a non-union steamfitter at Taber. The Lethbridge plumbers went

out on strike as a result. The Builders' the fore in the board proceedings and has Exchange held a special meeting when it was unanimously decided "that the Building Trades Council had entered into an agreement with the Exchange for one year from last spring, in which they had guaranteed that no strike would be allowed by any of the unions who are members of the Building Trades Council and parties to that agreement, and further that the Exchange have sufficient proof that a strike had been called." In order that there might be no misunderstanding of the matter, the Building Trades Council was immediately notified that the Exchange demanded a removal of the strike within twenty-four hours, failing which the Exchange would be justified in making any arrangements they might deem advisable for their own protection. An open shop was subsequently declared.

BUSY DAYS, THESE.

How, would you like to be the plumber, especially during the past week, when the extremely cold weather caused so many breakages in pipes and water fronts and ranges that approximately between \$7,000 and \$10,000 was garnered in by them as the emolument for the work they did. In many cases the breakages were caused through carelessness on the part of the householder, in others not so. One citizen had a general freeze up of all the pipes with a cost to him of about \$30 for fixing.

One plumber in the city had 120 water pipe breaks to mend, two ranges and four water fronts; another plumber fixed 50 broken pipes and another 40, another 36 and so on down, some more, others less.

The firms in many cases had as many as six and seven men daily for the week's cold days doing nothing but going from house to house, mending breakages and fixing frozen pipes.

It is generally believed that the recent cold snap has done more damage in a short time to water pipes, etc., than any previous cold snap of like duration.—Fort William (Ont.) Herald.

War Declared on Public Drinking Cup By New Medical Health Officer

Toronto, January 12.—A crusade has been begun by Dr. Hastings, Medical Health Officer of Toronto, against the public drinking cup. As substitutes, he favors putting sanitary fountains in the parks and bracket fountains in the city hall. Dr. Hastings is determined to wipe the public drinking cup off the map. He regards it as one of the most dangerous carriers of deadly germs. "On the edges of public drinking cups have been found the germs of tuberculosis, diphtheria and other dread diseases," he declares. "A public tooth brush would be just as logical. No sane person would think of using the same tooth brush that hundreds of other people use and yet unquestioningly they go on drinking out of the same germ-laden cups."

Dr. Hastings thinks a reform can be effected without plunging the city into enormous expense.

He has talked the matter over with Parks Commissioner Wilson and Property and Street Commissioner Harris. They agree with his sentiments about the public drinking cup.

For Sanitary Fountains.

Mr. Wilson will probably make provision in his estimates this year for the establishment of sanitary fountains in the parks. These new fountains will be so built that a little stream of water rises six inches or more from the mouth of the pipe, and flows sufficiently slow to permit of any person stooping slightly and drinking his or her fill of water. At each fountain will be five or six of those spouts, and they are ranged at different heights so that with comfort the six-year-old child or the six foot man can take a drink.

In the city hall Mr. Harris will probably instal bracket fountains as a substitute for the tumbler used in common now by all employees in the various departments.

Favors Penny-in-the-Slot.

Dr. Hastings thinks well of the penny-in-the-slot drinking fountains in use in many American cities. In these are provided sanitary drinking cups, made of waxed paper, neatly folded up, and one may be had by dropping a copper in the slot. When used, it is thrown away. Such cups are now in use in a local theater, and Dr. Hastings thinks they should be used in all public buildings.

PITY THE POOR PLUMBER.

The following story appeared in the Kingston Whig:

Perhaps, if you were to pay a visit to one of the stores where the plumbers are to be found—that is in "breathing spells"—you would be able to understand the situation. A Whig man dropped in one store, yesterday afternoon, just to see what would happen, and also to see if there was any sort of a rush.

The scribe had just got into the store, and made some remark about the cold weather, when the telephone rang.

"There's another call," said the proprietor of the store. "That bell has been ringing all day long."

He guessed right. It was a call. The water pipes in a house on C—— St. needed fixing, and the lady who was giving the order, wanted, to know if the man could come straight up to her house, and do the job. The good lady said she would be entertaining at a party that night, and would certainly like to have the work done.

"All right; I will send a man up just as soon as I can," was the reply given by the master plumber of the establishment, and he started in to talk to the scribe again.

But no chance. Again the telephone bell rang, and the man ran to get the message. This time it was a man. He was not in very good humor, either, and wanted to know what was the matter with the 'phone, as he had been trying to get the stores for about fifteen minutes or more.

"I've got a job here, and I want it looked after right away," he explained. "We had bad luck with our fires, and, as a result, the water has frozen in the pipes."

The same old story. He was told that the job would be looked after.

The shop keeper marked down the two jobs in his book, and with that a little boy entered.

"Mother wants you to come down and fix the lights," said the youngster. "There is one that don't work very well, and she thinks there must be something wrong."

"All right, my boy; it will be attended to." This was enough to satisfy the boy, and he was off.

The Whig man was only in the store a very short time, but the orders for this and for that, came pouring in, and the proprietor stated that this had been going on every day, since the cold weather set in.

This little story is written in order to remind the people of the rush the

plumbers have during the winter months, so in the future, if you should happen to want a plumber, and he should be a little late, in arriving, just remember that he is doing his best, and that he cannot be in two or three places at the same time. Just have a little patience, and give him a chance.

BAD CONDITIONS AT VANCOUVER.

Vancouver, Dec. 20.—The plumbing business in Vancouver cannot be said to be in the most desirable condition just now. Time was when there was a Master Plumbers' Association, which benefited the trade. Then one of the larger members defaulted to the extent of giving a favored price, with the result that several withdrawals took place when the name of the offender was withheld. The result has been since that many plumbers have been bidding on jobs according to inclination, and as a result the trade has suffered. Cutting prices in any line of business is never satisfactory, and in the present instance it has had very bad results.

Jobbers in the supplies for plumbers have expressed the opinion that they may suffer losses inside of another six months. In addition to the foregoing condition, another feature has presented itself. Recently a plumber skipped out, after getting together whatever he could. He was keeping an open shop, and his men, numbering three or four, unable to get into the local association without the payment of a big fine, started in business for themselves. They only want to make wages, and figure jobs without any particular charges. This applies to the Grandview district especially, where these men have opened up shop. The effect is that competing dealers have to figure very closely, and the statement is made openly that they estimate from invoice prices, instead of allowing a reasonable profit for themselves. This being the case, jobbers cannot see how a collapse is to be avoided in many instances. It is the natural sequence.

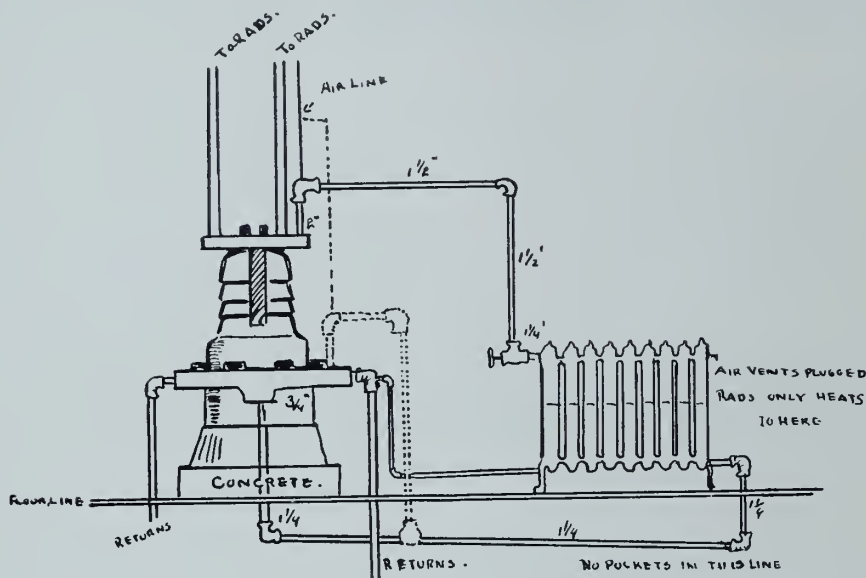
To enable the shop keepers to pull through, many boys are employed, and the local plumbers' association are insisting that no boys be allowed to use tools, unless in the company of a journeyman plumber. It has been the practice, and is now, to have boys do all the straight pipe work, in fact almost everything of the straight work, reserving the finishing for the qualified men.

The supply of plumbers just now is good, and although work is keeping up, there is a prospect of some being out of work during the next couple of months.

HOW TO OVERCOME DIFFICULTY.

W. B. Geary, Madoc, sent the accompanying sketch to Plumber and Steamfitter with a request for information in a matter that was causing him some trouble. The radiator shown was heating only a third way down. The fitter who set the boiler in the first place, set the return header with the openings all looking up and used the two end holes for his returns. The job

and return. On the contrary, the large sizes help to stagnate the flow. We would suggest using 1-inch piping and valve from some point as high as possible on the lines to the upstairs radiators, then drop down and put the return into the end opening of the header. A Honeywell generator would tone this job up and, by the slight pressure produced, push the water through the radiator giving the trouble.



was an overhead one. As Mr. Geary had other work on his hands, he did not want to tear out all the work, so he connected a return to the $\frac{3}{4}$ -inch draw-off opening. The point on which he asked information was whether the radiator would work if he piped according to the dotted lines in the sketch.

The problem was submitted to a local man, sufficiently versed to be deemed an authority and his answer is given below.

"We do not consider your correspondent would make any improvement by doing as he suggests. The radiator cannot work as it is because there is not sufficient static head to drive the water through. There are two or three easy solutions. One is to take off the connection to the radiator from some joint on either line marked 'to radiators.' We have not any definite data but presume these lines go to the upper storeys. If your correspondent will cut into either of these lines at the highest practical point, he will find no difficulty. We would have him remember that, broadly expressed, for every foot he wants to raise the water from return line to return opening, he should have at least three feet of 'head.'"

It should be quite obvious that, since the opening into the header is only $\frac{3}{4}$ inch, there is nothing gained by using $1\frac{1}{2}$ -inch flow pipe and $1\frac{1}{4}$ -inch valve

JUDGING THE FIELD

By Carl H. Van Fulson.

The question is asked, "Are there too many trade journals?"

The whole matter might be summed up by saying that there are too many poor ones and too few good ones.

The common superstition is that there is no publication that is not of some use both to the advertisers and readers. It is held that nobody ventures upon the uncharted sea of trade journalism without a feeling that there is a demand for the sort of publication he intends to issue.

But the impartial and wise outsider who has had occasion to look over the trade and technical papers in the various fields comes to the conclusion that some of these publications must make money in ways not appearing on the surface or else by dint of going increasingly into debt.

In the field of trade and technical journals it is a safe prediction that such publications will always exist. There can be no law to prevent their appearance, and even when advertisers compel publishers to show cause before they sign contracts, the ingenuity of tricky publishers will meet such requirements.

Not a few publications of the class to which I am now referring are house organs of the most puerile and useless sort, appealing only to an ignorance that is rare even in the districts far removed from the bustle of modern business life.

The advertiser's cry on all hands is that there are too many publications, that it is impossible for even a careful

man to discriminate between the rival claims of periodicals apparently of about an equal grade.

There may be, and probably is, some truth in these protestations of advertisers, but the condition is not different in the industrial field from that in the field of general advertising. Without any difficulty one can name five general magazines that are as like as peas in their contents, appearance, nature of appeal, and probable class of circulation.

The daily press can always be drawn upon for an apt illustration in discussing trade journal conditions, for the trade and technical paper is more nearly allied to the newspaper than it is to the magazine. The best publications are those that approach most closely to the quality of a modern newspaper. They are prepared under conditions more nearly resembling newspaper requirements than magazine exigencies.

Here is perhaps a good question to ask yourself in considering the value of a trade paper—is it run wholly and exclusively as a business proposition by the man or company that owns it? If the answer be in the affirmative, why the paper deserves at least careful weighing before you characterize it as superfluous in the field, as one of those that come under the head of "too many."

THE BEST POLICY.

By Geo. B. Cortelyou, formerly Secretary of the U. S. Treasury.

It seems to me that what the young man in business to-day needs to have emphasized is the importance of honesty, in its fullest and broadest significance.

If he possesses the power to see and to think clearly he will find that those who have achieved real and lasting success in business are men known for their scrupulous honesty and strict adherence to the highest standards of business conduct.

Of course we have, all too frequently, examples of men who have acquired wealth by methods in which the primary virtues seem to have played little or no part, whose natures have been hardened and whose souls have shriveled in the mad struggle; who sit apart, solitary and alone, trusting no one and trusted by no one.

The young man in business must see to it that his success is not purchased at such fearful cost. He must keep his mind open to the influences that make for human progress and social betterment, and he must do all his work with thoroughness, for it is only then that work is well done.

If he will do these things, then the greater his material success the greater the benefit, in the largest sense, not only to himself, but to his country.

The man who whispers down a well

About the goods he has to sell,
Will never reap the shining dollars

Like one who climbs a tree and hollers!

—J. H. Smith.

New Buildings, Water and Sewerage Systems

Opportunities Offered by Municipalities and Private Enterprise for New Plumbing, Heating, Ventilating or Sanitary Systems—Work Being Undertaken in Every Section of the Dominion.

Municipal Undertakings.

Goderich carried the by-law to raise \$26,000 by debentures for storm sewers.

Sydney, N.S., is considering an outlay of \$150,000 on permanent street work.

Preliminary surveys have been made for the waterworks at Winnipeg. The probable cost is set at \$30,000.

It is stated that North Vancouver, B.C., will expend approximately \$40,000 in the purchase of cast iron pipe.

St. Catharines ratepayers carried the by-law to expend \$180,000 for a new water main to increase the pressure and supply.

Debenture by-laws totalling \$456,000 will be voted by Edmonton ratepayers on January 22nd. They include \$175,000 for a stock pavilion at the exhibition grounds, and \$90,000 for the purchase of industrial sites.

Public Buildings.

A new theatre is contemplated in Victoria, to cost \$100,000.

Work has been started on a union church at Watrous, Sask.

Plans are being prepared for a new hospital at Kamloops, B.C.

Plans have been completed for an emergency hospital in South Vancouver.

Bricklayers' Union, Toronto, are to build a trade hall to cost \$50,000.

The Mac-Vicar Memorial Presbyterian church have decided on an extension.

A new municipal hospital will be built at Truro, N.S., in a year's time.

Tenders are being called by the Public Works department until January 20 for a new school house at Port Simpson.

The Presbyterian Synod of Alberta will erect a girls' college at Red Deer, to cost, including equipment, \$100,000.

W. H. Golding is to erect a first-class theatre with 75 feet frontage at St. John, N.B.

New municipal buildings are to be erected at Goderich. The referendum having carried.

The Baptist church at Regina will erect a handsome new edifice at the Lorne street and Victoria avenue.

Districts of Cloverdale and Port Mann, New Westminster, B.C., are to be given churches through the offer of W. J. Walker.

Tenders addressed to R. C. Desrochers, secretary, Department of Public Works, Ottawa, will be received until January 23rd for restoration of and addition to custom house at Quebec.

Owen Sound ratepayers carried the by-law for a Carnegie library.

The English-speaking Lutherans of Ottawa, have selected a site and intend to build a church.

Plans are being drawn for a new First Baptist church in Calgary. The old site has been sold.

A by-law providing for the expenditure of \$20,000 for new school buildings at Wallaceburg, Ont., has been ratified.

The board of the Ontario Provincial Winter Fair are considering the erection of an addition to the building at Guelph.

Building permits have been issued in Toronto by the Board of Education for a brick addition to the Avenue road school, to cost \$40,000.

The congregation of Knox church, Calgary, is contemplating the erection of a church on Sixth avenue and Second street, to cost \$100,000.

It is estimated that \$70,000 will be spent on the John H. Stratford Hospital, Brantford, as follows: New ward, \$40,000; central dining-room, \$10,000; contagious ward and alterations, \$10,000; central heating plant, \$10,000.

The head office of the British and Foreign Bible Society has promised \$25,000 towards the establishment of suitable Canadian headquarters in Vancouver, if the province raises \$50,000. A site has been purchased on Howe St., and \$4,000 is already subscribed.

The Winnipeg Board of Control decided to advertise the programme for competitive plans for an infectious disease hospital to cost \$200,000, despite the fact that only \$75,000 of the money is as yet available. The advertisement is to be conditional upon the procuring of the rest of the money needed.

Tenders for a new departmental building in Ottawa will probably be called about the last of January, work to commence in the spring. The building will be about 600 feet long and 19 feet wide, of five storeys, on the Mackenzie avenue side and six and a half storeys on Sussex street. The estimated cost is about \$1,000,000.

General Building.

Excavation has been started for the \$90,000 Forrest Block, Vancouver.

The Western Manufacturing Company, Regina, will build a large and up-to-date plant.

Gordon Stewart will erect a three-storey commercial building on Queen street, Ottawa.

It is rumored that a site has been purchased in Winnipeg for the projected Ritz-Carlton syndicate hotel.

C. Edey is preparing plans for a three-storey commercial building on Gladstone avenue, near Bank street, Ottawa.

The Grand Central Hotel, North Battleford, Man., is to be renovated and added to.

P. Tardiff has taken out a permit for a six-storey apartment house at 1092 Broughton street, Vancouver.

It is understood that the building occupied by Freeman's Company, will be replaced by a modern ten-storey office building.

Senator W. C. Edwards is stated to be rebuilding on a larger scale the flour mill recently destroyed by fire at Masson, Que.

Excavation work for the \$100,000 Donohue Block, Regina, has been completed and constructed will be started early in spring.

A New York syndicate is considering the location of a rolling mill at Sydney, N.S. Two sites have been secured under option.

The Waterous Engine works, have submitted building specifications for an addition to their present factory, to cost \$45,000.

The Herald Publishing Company, Montreal, will erect their building on the corner of Craig and St. Alexander Streets, as early as possible next spring. On the former site of the Herald, the owners may erect a modern office building.

It is announced that a prominent Calgary syndicate have purchased lots on the north bank of the Fraser river on which it is their intention to erect large grain elevators. The Royal Financial Company, Winch Building, effected the sale.

Street construction work has just been commenced on the new \$100,000 building being erected for the United States Shoe Machinery Company, Maisonneuve. The masonry and carpentering contracts are the only ones let in addition to the foundation and steel construction.

Permits were issued at Vancouver for a six-storey business block, Seymour street, to T. A. Fee, \$115,000; also to Smith, Davidson & Wright, for 4-storey warehouse, \$75,000. Plans have been submitted by Messrs. Smith, Davidson & Wright for the erection of a four-storey warehouse at the corner of Homer and Davie streets. It will be 80 by 100 feet and will cost \$80,000. The Merchants Bank of Canada has purchased the corner of Granville and Pender streets, where a large business building of about eight storeys will be erected.

PLUMBING AND HEATING MARKETS

MONTREAL.

Montreal, Jan. 13.—As was to have been expected, trade has remained somewhat dull, and there is very little news of any account to chronicle about the markets.

Business is still a little on the quiet side, although manufacturers report that quite an improvement has been noticed and indications for a good business year are very bright.

When the time of year is taken into consideration, it may be said that plumbers and steamfitters are exceptionally busy and the demand for soil pipe, boilers and radiators shows that building has been fairly active all over the country.

From present indications it would appear that although 1910 was a big year for the building trade, 1911 will be just as good if not better.

Tin is again stronger and the price of solder has been advanced $\frac{1}{8}$ c. Copper continues to show some weakness and quotations will be found in most cases to be a shade lower.

Soil Pipe.—A steady call is still being received for soil pipe, despite the time of year; showing that building is still going on to some extent. Quotations are: medium and heavy 70 and 10.

Lead Pipe.—The demand for lead pipe has remained good and orders continue to flow in in good style. No changes in prices are noted from last week and we quote pipe and waste 9c per lb., calking lead $4\frac{1}{2}$ c, traps and bends 50c.

Solder.—The high price of tin has been responsible for a $\frac{1}{8}$ c advance in the price of solder. Sales are not stated as being very heavy as this advance was anticipated by some and a good deal of stocking up was done. There are some who predict still higher prices, but this is more or less a matter of conjecture.

Iron Pipe.—There has been no very noticeable activity this week, although trade seems to be fairly good. No changes in prices have been noticed this week and we quote: $\frac{1}{4}$ -in. black, 63; galvanized, 48; $\frac{3}{8}$ -in. black, 59; galvanized, 44; $\frac{1}{2}$ -in. black, 69; galvanized, 59; $\frac{3}{4}$ to 4-in. black, $7\frac{1}{2}$; galvanized, $61\frac{1}{2}$.

Radiators and Boilers.—The market is firm and the fact that building all over the country is continuing well for the time of the year is evident by the steadiness by which orders are being received. Quotations are 60 and 5. Round hot water boilers 50 and 10; hot water radiators 50 and $7\frac{1}{2}$; steam radiators, 50 and $7\frac{1}{2}$ and $2\frac{1}{2}$ per cent.

Metals.—Tin has been very active this week, fluctuating to some extent and at

the time of writing is quoted one cent higher than last week. Copper is again a little weaker. Tin 45c. Copper 14c.

TORONTO.

Toronto, Jan. 13.—The plumbing market is seasonably dull. Jobbing work is occupying the time of the trade very largely, and in consequence the supply houses are not being overburdened with orders. Still, there is perhaps more activity noticeable than during the same period last year, and everything points to the rapid resumption of activity.

Reports from all parts of the country are to the effect that the coming year promises to be very busy from the building standpoint, and this spells a good year for the plumbing fraternity. Although 1910 was a busy year, it is anticipated that 1911 will be equally as good, if not a little better.

Rumors of price changes are rife, but so far nothing has been done locally. It is said that the competition of American steel in certain lines is likely to cause reductions in the price of certain material, but it is impossible at time of writing to assert definitely that anything tangible will result.

Enamelware.—There is still a rather more than reasonable demand for enamelware. One local supply house reports that the orders received of late have been all that could be handled, but, generally speaking, other firms have not been as busy as this.

Boilers and Radiators.—The trade in heating lines has been better sustained than in other departments. The great bulk of the work being under cover, plumbers have been enabled to continue contracts for the installation of heating systems right along.

Soil Pipe.—Orders have been received, but they have been "few and far between," the weather having been too cold to make outside work possible to any extent. Medium and heavy is quoted at 70 and 10; 7 and 8-inch sizes, 50 per cent. There is no change in fittings which stand at 70 and 10 off.

Lead pipe.—There is a small demand. Lead waste stands at 9c per lb., and calking lead at $4\frac{1}{2}$ c per lb. Traps and bends are still quoted at 50 per cent.

Solder.—The price is a little firmer, owing to the advances in tin. Half-and-half brings $20\frac{1}{2}$ c to 21c, and wiping 18c to 19c. Some believe that further advances will be seen, but there is no positive ground to go upon.

Iron Pipe and Fittings.—Despite rumors to the contrary, quotations are still steady. The discounts on malleable

fittings are quoted from $37\frac{1}{2}$ to 40 per cent; and cast iron fittings from 60 to $67\frac{1}{2}$. Cast iron bushings are 70 and malleable 65. Nipples are quoted at 75 and 10; headers 60; flanged and malleable-lipped unions, 65 per cent. Galvanized pipe is \$6.35 and black pipe, \$4.70 per hundred feet, 1-inch size.

Metals.—A cent advance is registered in tin, and it is believed the end is not yet in this continuous upward climb. Other metals are firm.

NEW PLUMBING BOOK.

Mechanical Drawing for Plumbers.—A book on the above subject, by R. M. Starbuck, well-known as the author of several valuable technical works on plumbing, has been issued by the Norman W. Henley Publishing Co., New York, price \$1.50. The book is written in a style that combines scholarly treatment with a thorough knowledge of the practical side of the plumbing trade. There is an "uplift" tendency quite noticeable throughout, the writer striving to educate members of the trade to the achievement of a higher status. The scope of the work is comprehensive, including instruction in the most elementary drawing and advice on the most technical and complicated of problems. It is in fact, a very complete summary of a phase of the work which every plumber would do well to master.

The technical book department of the MacLean Publishing Company, 143-149 University avenue, will supply "Mechanical Drawing for Plumbers" on application.

SEVERITY IS INTENDED.

It is asserted that the United States government intends to push the suit under the Sherman law against the 34 individuals and 16 corporations who are concerned in the action instituted against what newspapers have termed the "bathtub trust" and to secure jail terms if possible. This information was made public after a conference between William S. Kenyon, assistant to the Attorney-General Edwin P. Grosvenor, special assistant, and Frank H. Watson, United States district attorney at Detroit, and the legal representatives of the defendants. The trust was represented by Rush Taggart, of New York; Judge W. L. Carpenter and Leo Butzel, of Detroit.

SITUATION WANTED.

WHO is prepared to speculate with my twenty years' experience? I am open and prepared to give to the winning party, the use of my person with the know edge acquire during the past twenty years as a practical plumber and fitter, either as a manager, foreman, or partner. No cash on hand. Have good education in French and English, and know the business up-to-date. Answers to PLUMBER AND STEAMFITTER, Toronto. (4)



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This recent book specially written for those interested in Heating Apparatus and Installation for Houses, giving

Methods of Installing Heating Apparatus in the Home.
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A remarkable feature of the work is the great collection of diagrams showing the layouts of systems most successfully used in dwellings of different character and size, and including piping plans, radiator location and connections for dwellings, apartments, stores, etc.

265 pages. 268 illustrations.

PRICE, \$3.00.

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FOR SALE—One set tinsmith tools and machines, also tinshop and plumbing business. Reason for selling, unable to handle with department store. Apply F. E. NICHOL, Killam, Alta. (2)

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PLUMBING and Tinsmithing business for sale in one of the best country towns in Western Ontario with a population of 7,000. Stock and equipment about \$2,500. Will reduce to suit purchaser. Annual turnover \$20,000. A bargain. Box 1067, PLUMBER & STEAMFITTER, Toronto. (2)

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WANTED—Experienced heating man to sell "Pease" Boilers and Furnaces to the trade in Toronto; also man for Winnipeg and the West. Apply Box No. 1064, PLUMBER AND STEAMFITTER, Toronto. (1)

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Plumber and Steamfitter receives, from time to time, enquiries for the names of manufacturers of various lines. These enquiries come from firms who usually intimate they have looked through Plumber and Steamfitter but cannot find any firm advertising the line in question. In many cases these firms are anxious to secure the information at once. This page enables manufacturers to keep constantly before the trade lines which it would not pay to advertise in larger space.

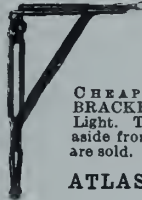
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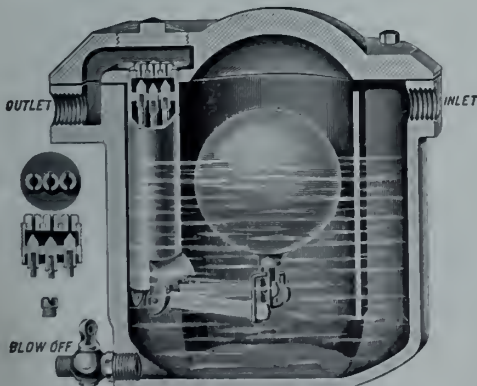
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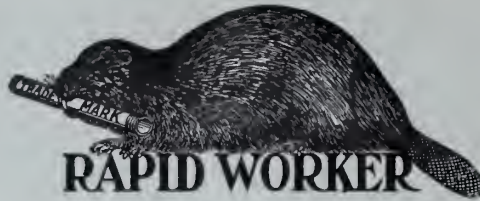
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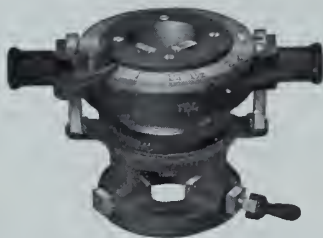
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One man with a Beaver Die Stock is worth two or three men with any other Die Stock made.

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HAVE cut the cost of pipe threading in two because they will thread all sizes of pipe without changing dies. They are built on the receding principle which positively enables one man to thread any size of pipe and produce absolutely tight joints for all work, including hot water. They save the time formerly used up in changing dies and looking after loose parts, and eliminate all of thread-stripping when backing off.



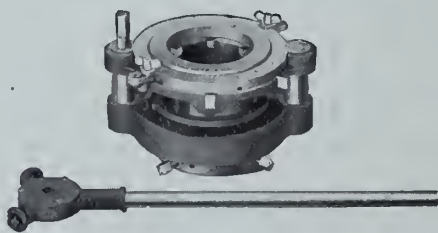
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A boy can operate it,



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And this is a line which doesn't take an awful lot of pushing and talking to sell. 'Morrison' Fixtures are very artistic, attractive and durable, and will appeal irresistibly to your best customers.

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*We charge the
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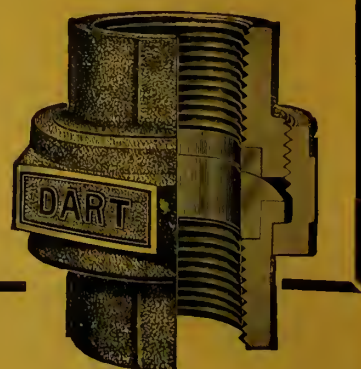
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No. 3

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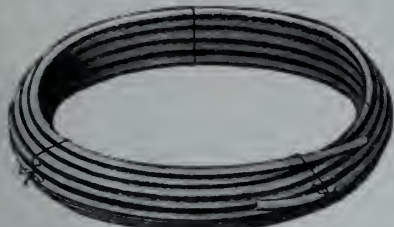
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Reducing in Run or Branch**Malleable and Cast-iron-pipe Fittings**

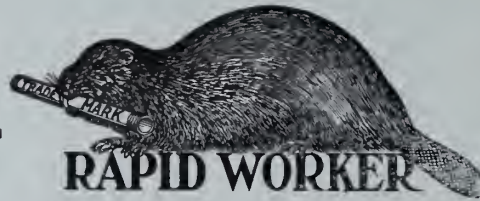
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One man with a Beaver Die Stock is worth two or three men with any other Die Stock made.

"Beaver" Adjustable Die Stocks

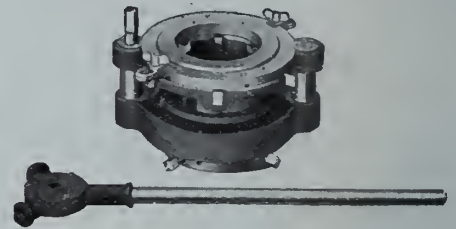
HAVE cut the cost of pipe threading in two because they will thread all sizes of pipe without changing dies. They are built on the receding principle which positively enables one man to thread any size of pipe and produce absolutely tight joints for all work, including hot water. They save the time formerly used up in changing dies and looking after loose parts, and eliminate all of thread-stripping when backing off.



No. 25A, threading 1, 1¼, 1½, 2-inch pipe.
A boy can operate it.



No. 6, threading ¼, ½, ¾ inch, complete



No. 60. Uses two sets of dies. One set cuts 2½, 3, 3½ in. the other cuts 4, 4½, 5, 6 in.; they are inserted without removing any parts.

No loose Bushings or loose Dies on No 25A and No 6, and they cut 1, 1¼, 1½ and 2-inch pipes.
We can furnish a separate set of dies for 1, 1¼, 1½ and 2-inch pipe.

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NYE
the Die
Man



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"Willie ain't no rose. Don't smell him. Lern him!"

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Last Spring I bought a high-priced lawn-mower, made by one of the biggest firms in the county. I paid \$10 for it and my man put it into use. It fudged a little the first day and despite all the care taken of it the mower went down and out. In less than a season I had to buy another mower. I went back to the great Chicago store where I had purchased the machine and asked what they would do about it.

"Sell you another mower," said the manager.

"Not on your life," said I, "your nerve is better than your business methods" and I walked out.

"Now, the facts in the case are that that lawn mower never was any good. The firm that make it feel they are big enough that they can afford to lose a customer occasionally by turning out a poor machine now and then, which they refuse to replace. As a matter of fact, I disagree with their policy and I don't believe it will win success in the long run—but LISTEN:

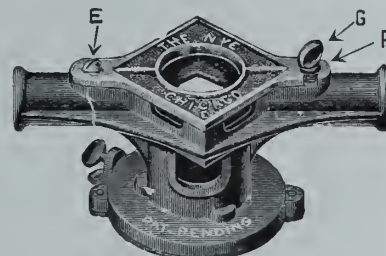
It would have been impossible for any man to have had such experience with a Nye Stock because I sell the Nye Tools under a specific guarantee and I make good all defective tools without making the customer feel like a chicken thief.

The reason I do this is because it is right and because it is good business. The name "Nye" on a tool stands for a square deal and a satisfied customer.

All I ever ask is a trial order.

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We use every means in our power to detect and preclude any possibility of leakage, and each "King" Radiator leaves our hands as nearly perfect as possible.

If you are not acquainted with the merits of the "King" you will do well to 'get wise' by placing a trial order.

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We carry a full range of Steamfitters' supplies and can quote you closest prices. Get details.

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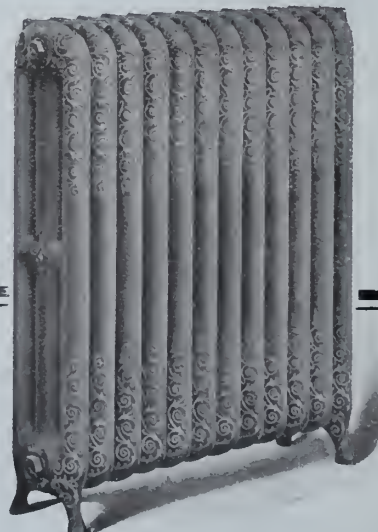
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TORONTO, FEBRUARY 1, 1911

TECHNICAL EDUCATION.

Technical education has become one of the live questions of the moment. It is now recognized that instruction should be given in the theory and practice of every trade. A man can gain in the workshop a good insight into his work and become thoroughly capable without any other training but if, before leaving school he learns something of the theoretical side and acquires handiness with the tools, he is bound to become a better and more skilled workman. Likewise, the man who attends night school and takes up such branches of work as mathematics and mechanical drawing, will soon make himself more useful than his fellow workman, who learns only from his every day experience in the shop. There is a limit to the advancement of the latter; but there is nothing too high for the other to reach in time.

Technical education is needed in the plumbing and steamfitting trade. The work of the plumber has advanced far beyond the purely mechanical stage. On his shoulders rests a heavy responsibility; for health depends to no inconsiderable extent on proper sanitary arrangements. His work is intricate, requiring the exercise of ingenuity and brainy discernment, as well as mechanical skill. The plumber, in fact, must have a knowledge of the principles of engineering and be well versed in many directions. To become a good plumber requires time and steady application. Certainly, no trade demands to-day a higher standard of efficiency. The plumber not only has to please his customer but must submit his work to the discerning eye of an expert critic, in the shape of a civic inspector. The day of slipshod, rough-and-ready plumbing has passed and only first class work is now permitted.

Technical classes would therefore afford the plumber a chance to improve his knowledge of the work and to verse himself in theoretical studies, such as mechanical drawing. Information thus obtained would be found useful. Likewise, if the young lad, entering the trade, already had some idea of the work and was able to use the tools with a certain measure of skill, he would undoubtedly become a better workman than if he began without any previous training.

THE METAL MARKETS SHOW FIRMNESS.

The metal situation in Canada at present can best be described as "eminently satisfactory." As the inevitable result of the gloomy predictions made around the end of the year by men closely in touch with the American iron

and steel industry, some uncertainty was felt on this side of the border. But conditions have been so steadily healthy in tone that the last trace of doubt has been gradually driven out and now none doubt that a prosperous and active year is ahead. Orders for present and future requirement are being freely placed and both buyers and sellers seem to be imbued with the fullest confidence.

Chief interest for the past few months has centered in tin. The situation has been in the hands of a London syndicate and the completeness of their control has been most amply demonstrated by recent developments. Week by week, the price has been forced up and it is now expected that the present week will see the 50 cent mark reached. The marked upward tendency in tin has been accompanied recently, however, by a firmer tone. Orders are being placed more freely and in greater number. The explanation seems to be that those who were inclined to hold off in the expectation of a slump, have become convinced that all "bearish" tactics are doomed to prove futile and are now ready to cast in their lot with the "bulls."

In other metals, the tone of the market is healthy. Renewed confidence is shown in copper and general activity dominates the trade.

RAPID GROWTH OF THE WEST.

In another part of this issue, reference is made to the rapid growth of the plumbing and steamfitting industry in the West. The phenomenal advance of that section of Canada, which lies beyond the Great Lakes, is reflected in practically all branches of trade and commerce and in none more so than in the plumbing business. Starting in at a stage when man's ideas on the problems of building construction and sanitary arrangement have been greatly changed, the average western town is being planned and built up, according to the most modern order. Each building is designed with a view to utility and appearance and according to the most advanced sanitary precepts. The sanitary engineer is playing an important part in the upbuilding of the Western provinces.

It is gratifying to note that the trade has established itself throughout that section on a higher basis than in many of the older established countries, perhaps. The western plumber is aggressive, keen and thoroughly up-to-date. He has the reputation of doing good work and doing it fast. He keeps up a good shop, advertises well and embraces in the scope of his business such side lines as may legitimately be handled.

WAR DECLARED ON DRINKING CUP.

War has been declared by the health authorities on the public drinking cup. The ban of the medical big-wigs having been placed upon it, the conclusion is reached that it will not be long before the common cup passes out of common use. It will not be too soon.

As the disseminator of disease germs, no institution has been more active than the drinking cup. One hundred lips will touch it in an hour's time. It is handled by hands that are grimy and unclean. It becomes coated with dust and mud. Scarcely less disgusting than a common tooth brush, it presents almost equal danger and it is no worse than a common soup spoon or wash basin would be.

It is a surprising fact that people of common sense continue to use cups that hang by public fountains and taps. Fastidious people who would not use a soiled serviette will drink from a battered mug of granite that a tramp may have used the minute before. It is time, then, that the public should be protected against itself and the common drinking cup removed.

AN ESTIMATE SHEET IS NEEDED.

The estimate sheet is a valuable aid to accurate figuring on contract work. It is the only absolute way in which mistakes can be avoided. Even the possessors of the longest memories will sometimes forget some item or neglect to figure on a certain phase of the work. Cases are known where absent-minded plumbers have forgotten to put in the cost of the bath tubs and have, as a natural result, suffered heavy losses.

With an estimate sheet, mistakes cannot very well be made. The plumber goes down the column and fills in the price opposite each item needed in the work. If he goes over the list carefully, he cannot leave anything out in his estimate, as the sheet is drawn up to cover all contingencies. He is thus safeguarded against the losses often entailed by lapses of memory and careless figuring.

AN ASSOCIATION LIBRARY.

At the annual meeting of the Calgary Association of Sanitary and Heating Engineers, a number of important matters were taken up. It was decided to institute a library of technical works for the mutual benefit of all members. A man can broaden his viewpoint and improve his knowledge of the trade by reading books pertaining thereto. In the same connection, it was decided to keep all catalogues issued by manufacturers and plumbing supply houses for the use of members of the association. This is an admirable idea, as it will provide the members with a ready source of reference.

THE VALUE OF ADVERTISING.

The master plumber has as much reason to advertise as a dry goods or hardware merchant. He has goods to sell and has opposition to contend with. There are dull seasons when efforts are needed to stimulate trade. He can, therefore, use printer's ink to good purpose.

Advertising for the plumber can be made to serve a double purpose, particularly if he is located in a small place. He is then in close touch with the surrounding country district and by advertising he can make a bid for the farm trade, as well as improve his connection in the city. The country sections are soon likely to prove a splendid field for the plumber. The farmer is rapidly

taking advantage of the improved modern ideas for home comfort and the day is not far off when steam-heated homes will be found throughout the country and the house of the farmer will have up-to-date plumbing. By advertising, then, the master plumber's name will become known to people who live in the rural sections and he will be gradually laying the foundation for a splendid business in the not far distant future.

EDITORIAL BRIEFS.

The public drinking cup should be abolished.

* * *

If you are an "absent-minded beggar," an estimate sheet is what you need. Then you won't forget to include soil pipe in your contract price.

* * *

"If I get just one new customer a month through advertising," said a progressive plumber, "I feel that it was money well spent." Think it over.

* * *

The price cutter is a mean "critter." He is not content with spoiling his own chances of reaping a profit; he wants to spoil the chances of everyone else.

* * *

No man can boast a perfect memory. Therefore, an estimate sheet is needed if it is desired to show unvarying accuracy in figuring on contract work.

* * *

Prosperity perched on the banner of the plumber in 1910. It will take more than the pessimistic predictions of prophets of gloom in the United States to drive it away during 1911.

* * *

Few industries have advanced as rapidly in recent years as that of the sanitary engineer. Not only has he brought added comfort to the people of to-day but he has become a valued aid to the physician in warning against the spread of disease.

* * *

"Reciprocity" is now the topic on every hand. More reciprocity in the plumbing business would not be amiss—freer intercourse between members, the giving of mutual assistance and advice and a more general desire to co-operate in overcoming detrimental conditions.

* * *

The plumber and the electrician are the wizards of modern days. They do not cast spells nor work by incantation but have made it possible by pressing a button, or turning a knob, to flood a room with light or throw it instantly into darkness, to fill it with warmth and comfort or to introduce cold.

* * *

The advice once given by political organizers to "vote early and often" might be applied to advertising methods. Advertise early and late and often. Do not give up during the dull seasons; that is the time when trade needs stirring up the most. Keep everlastingly at it. As a final reminder, do not advertise in print only; advertise by the quality of your work.

* * *

A ship-builder who could construct a vessel all ready for the water and then not launch it because he couldn't afford tallow to grease the ways, would be a fit candidate for a lunatic asylum. Yet he is no worse than the dealer who has built up a business and then refuses to float it upon the sea of business because he cannot afford to advertise.—Commercial News.

Technical Education is a Pressing Need To-day

Instruction Required in the Plumbing and Tinsmithing Trades—On all Sides There is a Growing Desire for Classes Where Men Will be Able to Perfect and Broaden Their Knowledge—A Description of the Work Done in Australia.

One of the recognized needs of the day is technical education. Man has come slowly to a realization of the fact that the boy, who aims to enter some one pursuit, and the young man, who is learning a trade, need practical instruction along their chosen line. The boy who intends to become a machinist needs instruction in the use of tools and in mechanical drawing rather than a schooling in Latin or botany.

The trend of the times is notably toward a more practical form of education for the boy. The school curriculum up to a date not very far remote did not in any sense cover the mechanical or manual side. It was designed to fit a boy to become a lawyer, a doctor, a school teacher or a bookkeeper; but it made no pretence at training him to be

There is another phase of the question of almost equal importance. There are in every trade ambitious, energetic men who are anxious to get ahead. They desire first to master all the fine points of their trade; they then strive to forge still further to the front and ultimately reach positions of highest trust and responsibility. Men of this stamp will often work all day and study during their spare time, earnestly endeavoring by every means in their power to improve their store of knowledge. Generally, however, they are hampered in their efforts. In the workshop they gain an insight into the practical end; but, to become proficient all around, they require to master the theoretical side as well. In the latter respect they need assistance; and it is to render help to

The Plumbing Trade.

In no trade is proficiency more requisite than in plumbing. The work of the plumber calls for a rare combination of skill and judgment. No two tasks are ever quite the same and the plumber is constantly brought face to face with problems which tax his knowledge and skill to the utmost. A higher grade of work is demanded to-day than ever before and incomplete, slipshod work will not pass.

It is peculiarly necessary from the standpoint of the public that plumbing work be well done. Public health demands it. The comfort of the home depends largely on the efficiency of the plumbing and heating systems.

Technical Education Desired.

It is gratifying to note that plumbers, as a general rule, are very anxious to perfect themselves in all that pertains to the trade. But there is a great deal to be learned. Not only must the man, who desires to become thoroughly proficient, master the practical end but he must know something of mathematics and be fairly apt at mechanical drawing. The technical class becomes, then, a matter of moment to the ambitious plumber.

On all sides the desire is expressed for technical classes which plumbers could attend. Here is an extract from one letter of many received by Plumber and Steamfitter:

"We have boys growing up, and after we have spent years of time and thought in building up a good connection in this country, we are naturally desirous that these boys should continue the business when we are finished with it and in order that they may do so in a thoroughly efficient manner we want each one to master some department thoroughly. We have one lad that we want to master the tinsmithing department, and one to master the plumbing and steam heating and in order that they may do this we want to send them to some institute where they could be scientifically taught these trades, and where they would be imbued with a spirit of satisfaction at work well done, and they could look with pride upon a well finished article or contract—a wholesome pride, we mean, such as comes to any man in whatever walk of life he finds himself, when he is a master in his own particular line, and is



A class of plumbers at work in the Sydney Technical College. Practically all in attendance are apprentices or young journeymen.

a good mechanic, a plumber or a builder. As a great majority of boys must necessarily take up manual work of some kind or other, this absolute disassociation of education from the practical form of instruction that the average boy needed, showed a singular lack of foresight on the part of the educationists.

The pendulum is swinging to the other side now, however. Men have awakened to the fact that efficiency is equally necessary in all avenues of life, and that the highest form of proficiency in any occupation or trade can be attained best by giving the boy a thorough grounding in the elements of the trade or line that he may choose to follow. The technical school is becoming one of the most important branches of the educational system.

the ambitious mechanic and tradesman that the technical school is partly designed.

Where the Need is Felt.

This is an age of specialists. It is an exacting age; everything must be done well and consequently it is the specialist who is in demand. A man does not need to do more than one thing, provided he does that one thing well.

For the success of a business, it has become necessary that proficiency mark the staff from the president to the messenger boy. A thoroughly capable staff of mechanics is quite as essential as a brainy manager; for the business stands on the quality of its output. Capable help has become, then, the great industrial need of the day.

able to give his character and express himself in the work of his hands.

"We are operating both tinning and plumbing departments here, but we want our boys to get more than we can give them, for as water does not rise above its level, we fear our lads may not rise above the level of mere mechanical skill, and this falls far short of what we would like for them, without making any reference to the development of character above hinted at."

The above letter was from a member of a progressive western firm. Similar sentiments are expressed by journeymen and the progress of the Technical Commission is being watched with greatest interest by plumbers and tinsmiths in all parts of the country.

It is the earnest wish of every man who has the interests of his trade at heart that the time will not be long postponed when classes will be conducted in these two branches—and in all other branches as well—in all parts of the Dominion.

How Classes are Held.

It is interesting to note that plumbing classes are conducted very successfully in some countries. The accompanying illustration shows a class at work in the Central Technical College at Sydney, N.S.W., Australia. The institution is a great aggregation of different schools, conducted, for the most part, during the evenings. About seventy-five per cent. of those who attend the classes are apprentices or men employed in different trades—thus exemplifying the fact that there are always large numbers who are only too willing to avail themselves of an opportunity to broaden their knowledge and heighten their usefulness. In the words of superintendent Turner, the students "attend the classes in order to supplement their practical experience and to learn something of the theory of their calling."

Special attention is paid the classes in the building section. In the plumbing class there are 276 students. Recently new sections were added, viz., metal working and copper smithing, and there are 16 and 24 students respectively in these classes, making a total of 316 students connected with the plumbing trade.

Altogether there are 4,000 students engaged in trade instruction, 1302 being in the building section.

In commenting on the plumbing section, the superintendent professed to take a great interest in that branch. Plumbing, to his mind, was a highly technical trade; but it was something more. There was so much science about it now that it was well on the way toward being a profession.

There is a marked tendency in Canada

to follow the laudable example set by the Sydney Technical College. Technical institutions here are considering the matter and it is altogether probable that classes for plumbers will be started in some of the larger cities before very long. In one case, at least, estimates of the probable cost of the neces-

sary appliances and stock are being secured.

In the meantime, the Technical commission now at work is in receipt of constant reminders from plumbers and tinsmiths alike and the report of that body will doubtless cover the situation with respect to both trades.

Plans Made to Arouse Interest of Plumbers

Officers of National Association Desire to Stimulate the Work in the Provinces Again—Steps are to be Taken at Once —
Some General Notes.

The officers of the National Association of Master Plumbers and Steamfitters of Canada, are seriously considering the problem of improving the provincial organizations. A meeting of the officers and executive will probably be called within the next fortnight to discuss the matter and devise measures to stimulate interest in each province.

It is felt that, for the good of the trade, there should be a good provincial association in each province of the Dominion. Of late years, the provincial bodies have been practically disbanded, and the membership of the National has been made up largely of delegates from local organizations. To put matters back on a better footing, it will be necessary to get the provincials together again.

The first step has been taken in Ontario. A meeting of all the master plumbers in the province has been called for Good Friday at Toronto. In order to insure a good attendance a systematic canvassing campaign has been decided upon. The province has been divided into districts, and one live man in each district chosen as convenor. On each convenor rests the responsibility of seeing that the master plumbers in that district are notified of the meeting, and urged to attend. Where possible, personal canvass will be resorted to, and no effort will be spared to get the members of the trade interested.

A General Campaign.

It is now proposed that similar steps be taken in all of the other provinces. It is felt that the time has come for action and a spirited campaign will be instituted without delay. The work will necessarily have to be done through the Provincial Vice-Presidents and their active assistance will be required. Secretary LeGrow is opening correspondence with the vice-presidents, with a view to enlisting their assistance and getting suggestions from them.

The Provincial Vice-Presidents are:—Nova Scotia, Frank Dexter, Truro; New Brunswick, B. E. Blake, St. John; Quebec, H. W. Munday, Montreal; Ontario,

R. J. Shannon, Toronto; Manitoba, R. Thomson, Winnipeg; Saskatchewan, A. D. Henrich, Moose Jaw; Alberta, E. J. Young, Calgary; British Columbia, R. C. Hodgson, Vancouver.

The object aimed at can only be obtained, however, through the active participation of the master plumbers as a body. If each plumber determines to lend his assistance to the movement and to help it along as far as lies in his power, the improved footing will soon be reached. It is largely a matter of publicity. If the question is taken up at the local association meetings and discussed there and individual plumbers will take the time to call up other members of the trade and talk it over with them, the result will be the creation of a widespread interest and enthusiasm.

First and foremost it is continuity of purpose that counts. To achieve results, the good work must be kept up steadily. Intermittent effort will not have a lasting effect; it is necessary in a matter of this kind, not only to arouse interest but to keep it aroused.

Association Notes.

Secretary LeGrow has had official letter-heads printed for the National, on which all association letters in future will be sent out. It was necessary previous to that, to use private stationery.

Members of the trade in the West are alive to their best interests. Witness the strong associations in Calgary, Edmonton and other cities, and the generally flourishing condition reported from those centres.

President Cooper of the National was re-elected as presiding officer of the Toronto Association. He is one of the busiest men in the Queen City.

Each Provincial Vice-President should endeavor to stir up interest in his own territory.

Trade problems should be discussed at local association meetings. Only by general discussion can questions of wide import become thoroughly understood and solutions of knotty problems be reached.

Annual Meeting of Calgary Association

Change in Name is Duly Ratified—An Effort Will be Made to Perfect Organization in Alberta — A Library of Technical Works to be Started.

Calgary.—The Calgary Master Plumbers' Association held their second annual meeting on Tuesday, January 10. A large and enthusiastic attendance bore witness to the interest that the members take in their Association, and the vote of thanks, tendered to the retiring president, Jas. Marr, for his earnest efforts to further the interests of the plumbing and heating fraternity in Calgary during his term of office, was a very hearty and cordial expression of the esteem in which that gentleman is held by the members. The new constitution and by-laws of the association were formally adopted, and the change in name to that of "The Calgary Association of Sanitary and Heating Engineers" was ratified.

The election of officers for the year 1911, resulted as follows:

President—E. J. Young.

Vice-President—A. C. Grant.

Secretary—N. M. Burnett.

Trustees—Jas. Marr and R. J. Priestly.

Mr. Young, was vice-president for the year just concluded, and is also Provincial Vice-President of the National Association for Alberta. His experience in association work will be of great assistance to the Calgary Association in its efforts to perfect organization both in Calgary and the whole Province of Alberta.



E. J. Young, Newly Elected President.

The convenors of the year's standing committees were also elected, each convenor being entitled to a seat on the executive committee. These convenors are as follows:



James Marr, the Retiring President.

Arbitration Committee—E. L. Martin.

Sanitary Committee—Chas. E. Good.

Heating Committee—A. Desmarchais.

Legislative Committee—Jas. Marr.

Conference Com.—R. J. Priestly.

Apprenticeship Com.—V. C. Tremaine.

The report of the association since its formation in November, 1908, showed that, starting with a membership of eight, (8) the association has increased until it now embraces all but two of the firms in the city, and the benefits accruing to the plumbing and heating trades through the association's efforts to increase the efficiency of the master and men, as well as to foster the cordial relations existing between the master and the manufacturer and supply house, has been incalculable.

Reciprocity and the Plumbing Trade

The report of the "Reciprocity" Commission stipulates that a change be made in the duty on "basins, urinals and other plumbing fixtures of earthenware, for bathrooms and lavatories, baths, bath tubs, sinks and laundry tubs of earthenware, stone, cement or clay or of other material."

The present Canadian tariff is:—Preferential, 20; Intermediate 30 and General 35. The United States duty is 35 per cent. to 45, according to the material. It is now proposed that a mutual tariff of 32½ per cent. be set on goods passing under this provision.

The Start Library.

It was decided to install a library of technical works and other volumes of general usefulness for the use of the members and also to secure every catalogue possible from firms connected with the plumbing, heating and ventilating business, these to be placed in the library so that the members could always refer to them when desirous of doing so. A committee was appointed to go into the library matter and an order for about fifty volumes has been placed with a local firm, these volumes to form the nucleus of a complete library. In regard to the catalogue branch, the Association would be glad to receive all the catalogues from the manufacturers and supply houses possible, and the advertisers in The Plumber and Steamfitter are urged to forward any catalogues that they have.

A BIG CONTEST.

The Honeywell Heating Specialty Co. are inaugurating a \$500 contest, that amount being offered in prizes for the best answers sent in by plumbers with reference to their experience with Honeywell generators. The first prize is \$200, the second \$125, the third \$100, fourth \$50 and fifth, \$25. Great interest is being excited in the contest.

LARGER CASH DISCOUNT.

Toronto supply houses have sent out notices that, beginning with March 1, the Toronto trade will be given a 10 per cent. cash discount. The discount will be allowed on all payments made on or before the fifteenth day of the month in which the purchase was made. Cheques sent on that day and received on the following day will be acceptable at the same terms. The discount applies only to plumbing supplies.

The members of the trade in Toronto have been striving for some time to get a better cash discount, and, as 2 per cent. was previous figure, the new rate will be a distinct gain.

ing from either country to the other; a decrease in the case of United States of from 2½ to 12½ per cent., in the case of Canada of 2½ per cent.

"Will not have any effect," is the sum and substance of the opinions expressed on the proposed change by men closely in touch with conditions. It is pointed out that the reduction is so small that it cannot have any appreciable effect.

One Toronto jobber points out that, according to the wording of the clause, enamelware goods will not, in his opinion, come under this provision.



POINTS ON HEATING

By
CHAS. H. DENISON



Chapter 2.

Having given a somewhat general idea of the different forms of heating in the previous chapter, it might be wise to consider one or two other points connected with the heating problems, before going more minutely into the different things which make up this science, for certainly that is what it has become.

There are several points which will render the best of boilers and radiators practically useless as far as getting any reliable results are concerned. These matters concern the master, the journeyman and the owner of the heating plant. I will give one very common fault concerning each of these parties. The job may fail because (for numerous reasons) the master has planned it incorrectly: it may not succeed likewise because the journeyman has "botched" up the whole business and made a complete failure of a well planned installation: the best job ever may be spoiled by an obstinate, ignorant owner who thinks he knows it all and really would not be competent to boss the filling of a "tea kettle."

These are three very common faults met with in every day life and in almost every locality and they are faults which do much to injure the proper working of steam and hot water heating apparatus. The party who has determined to install some kind of modern heating apparatus will, therefore, do well to size up the different heating contractors before he places the job, for of all the nerve wrecking, heart wrenching things that was ever placed in a residence, a poorly put in piece of steam or hot water heating is about the limit. Don't, Mr. Householder, be penny wise and pound foolish and give your bid to the lowest bidder simply because he happens to quote the cheapest price. The chances are that such a job will cost you far more, at the end of five years, than if you had taken the highest bid and given the bidder a "plug" hat into the bargain, as consideration of his good services.

Get Competent Contractor.

Select a contractor that has sense enough to employ competent mechanics and pay them a proper amount for their

services. A first-class journeyman is not going to ruin your residence by his ignorance or carelessness and you will find him very much of a gentleman who is only too glad to explain to you fully the workings of the apparatus, provided that you have the sense to treat him as a man and not the mere "clod" that some individuals seem to think the working people are.

Tie up to the contractor who can furnish you with a clear cut idea of the job; a correct set of plans; who can point to several jobs that are giving complete satisfaction and stick tight all the more if this man absolutely refuses to take one red cent less for the job than the price he has quoted to you in the estimate. That contractor is quite likely to know his business and he is probably the man who will give you a first-class job. He can't afford to give you anything else.

Competent, reliable mechanics do not spring up like mushrooms. I once had a man tell me that "he turned plumber overnight." I heard that same chap advise a fellow workman to always put the work in so that it would freeze up, as "it made so much more job work," which would give any one a fair idea of the class of man that he was. I remarked with respect to competent journeymen because some householders are under the impression that they can send to some city perhaps one hundred or one thousand miles away purchasing the apparatus as a knock down price and install the same in a workmanlike manner all by themselves. It might be satisfactory to them (provided that they did not know what a good job really was) but it's a ten to one shot that such wiseheads get stung every time and call on the local heating man to pull them out of the hole that they have dug for themselves. So, taking it near and far, about the first thing to do for all parties concerned is to get set for the job and then to get started at it along the right lines. The owner must have something to show what he is going to receive for the money he is putting into the apparatus, and, likewise the contractor must have something to show when he is going to get his pay and in what amounts for the goods sold and services rendered. The man who will take a contract for several

hundred or several thousand dollars worth of plumbing goods and the necessary labor involved may be a good hearted fellow all right enough, but he is almost sure to land himself in a "peek of trouble" before the job is completed and if he escapes a law suit he consider himself extremely lucky.

Draw Up a Contract.

Therefore it is quite in order that a contract should be drawn between the two parties about to enter into the business deal so that each may be sure of just where he is at. This does not mean that either party is suspicious of the other, but there are easily one thousand matters that might arise which could be construed in various manners. This contract should be entirely fair to both parties and bind neither to an impossible undertaking. The contractor should set forth, in a manner capable of no mis-construction, just what the householder is to receive in that contract. Too many times the subject is treated in an indefinite manner which only leads to trouble. It should be also stated when the payments are to be made and if the contractor is foolish enough to allow any per cent. of the agreed price to be withheld (held up is a better way of stating it) it should be set forth in a manner so that there is no possible manner of getting around the same. These points are very common mistakes made in the business and I mention them because they are the things that have, and probably, will continue to make much dissatisfaction in the business. It's a "cinch" that if we could eliminate some of these unsatisfactory points mentioned, we would have much more business as a result. It is to the interest of both parties, therefore, that matters should proceed as smoothly as may be during the time that it takes to install the apparatus. See to it, friends, that you do not get dippy as matters progress. The boiler may be held up on the road, having been side tracked at some out of the way junction by some diabolical freight agent; the weather may have turned cold and the only heat available be the cook stove in the kitchen, but stick it out for when the job is "fired up" and you feel its pleasant effects, you believe that summer time has come for you at last.

Smoke Test is Now Being Enforced

Toronto Plumbers Must Submit Their Work to This Test Before it is Passed—New System of Supervising Inspection is Proving Satisfactory.

Toronto:—No plumbing work is passed in this city now, unless the smoke test has been applied. An order to this effect was issued some three weeks ago by Medical Health Officer Hastings, and since that time the regulation has been enforced in all cases.

There has always been a clause in the plumbing by-law providing for the enforcement of the smoke test, but it was never before rigidly adhered to. Some plumbers had the necessary ap-

paratus themselves, and generally applied the test, but the great majority had never gone to the expense and the trouble involved. Last year 595 smoke tests were made out of 5,025 permits issued, or a trifle more than ten per cent. This year one hundred per cent. will be tested that way, if the health officer does not recede from his present position.

System Works Well.

The new system inaugurated, when Supervisor Meadows was appointed, is working satisfactorily. A number of questions have been referred to him by



Making the Test on Roof Top—From the Metal Worker.

master plumbers and inspectors and he has been called upon to give rulings on the proper interpretation of the plumbing by-law in a number of cases. The points involved have been generally of a minor nature, however, and no question of really large import has yet arisen.

A Smoke Inspector.

As a few plumbers only have the machine, Supervisor Meadows has appointed Inspector Copping to attend to all the smoke tests. Inspector Copping does nothing else, and uses a testing machine supplied by the city, so that the individual plumber is not required to invest the sum of \$25 to acquire the same. Needless to state, the inspector is kept pretty busy.

The test is made as a general rule from the air inlet, but in some cases, as in the accompanying illustration, it has been made from the roof. It is not a difficult operation, and does not take long to perform.

Inspector Copping uses tobacco stems to produce the smoke, and this does away

with the extremely disagreeable odor which was associated with the test when cotton waste, oil and sulphur were used. The latter combination produced an odor similar to sulphurated hydrogen, but, of course, lacked the qualities of the hydrogen.

"KNOCK-DOWN" TOOL HOUSES.

J. F. Brady.

There are a number of contracts secured by many of the plumbers which carry them through a number of months in the year, during which time of construction of the work it is necessary that there be some secure and weather-proof place to store both material and tools.

There are several firms in the District of Columbia who in such cases go to the expense of building a tool house in front or on the job and tearing it down when the work is finished. This is, to say the least, under most circumstances, an expensive way of doing, for I believe it would be more profitable for them to follow the example of another firm of

whom I know, who have kept their boys at work during the winter in the shop when there was nothing else for them to do in the plumbing line—building forms or sides, the floor and the top of such houses, in such manner that all that is necessary to do with it when a big job is to be started is to haul the forms to the scene of the new work, put down the floor, set up the sides in the grooves provided and secure the top in the manner planned—and there is the completed tool and material house. The putting together and taking apart would not consume probably more than a couple of hours, the making of the forms in the shop, of course, would take several days—but when once made, well painted, good tar paper or tin roof painted, you have a "knock-down" tool house, which can be used over and over again many many times.

The difference between this form of construction and that which is generally employed is that in those houses hastily put up on the job old boards of any kind are used and put together in a manner 'just to hold'—and that's about all they do. But it must be remembered that these boards too have to be bought and probably cost pretty near as much as a little better quality, which will last a much longer time, make a better show on which to place your sign as the plumber of the job, and be more of a protection both from the weather and the sneak thief.

A QUEBEC PLUMBER'S ORDER.

The Province of Quebec is a large one, and the plumber in some of its small French towns, is a jack-of-all-trades. He is a plumber, a tinsmith, a heating engineer (chiefly of stoves), a bicycle repairer, and a fixer of wooden sidewalks, if need be. His chief interests in life are his religion, his large family, his excellent brand of wine and the city of "Kébec." A shoe-dealer in the city of Quebec received the following quaint order from one of these plumbers:

"You will put some shoes on my little families like dis, and send them vary queeck by Sam Jemison, the carrier: One man, St. Jean (me), 42 year; one woman, Sophie St. Jean (she), 41 year; Hermedes and Lenore, 19 years; Honore, 18 year; Celina, 17 year; Narcisse, Octave and Phyllis, 15 year each; Olive, 14 years; Phillippe, 13 year; Alexander, 12 years; Rosina, 11 year; Bruno, 10 year; Pierre, 9 year; Eugene (we lose beem); Edonard and Eliza, 7 year each; Adrienne, 6 year; Camille, 5 year; Zoil, 4 year; Joseph, 3 year; Moise, 2 year; Muriel, 1 year; Hilaire (he go barefoot). How much?"—Domestic Engineering.

HONEYWELL
HEAT GENERATOR

\$500

— IN

To Be Absolutely Given Away Feb. 15

Usually plumbers and fitters have to work pretty hard for their money and have to deliver a good deal for the profit they get, but here is an opportunity where for only enough time to write a letter they may get a few hundred dollars.

50,000 HONEYWELL SYSTEMS

Since January 1st, 1905, there have been installed 50,000 Honeywell Systems of hot water heating. The most of these systems have been erected by fitters in the United States, but as the Honeywell System is now largely used in Canada, this proposition is open to both American and Canadian fitters.

Practically all fitters who are now using the Honeywell System have installed at some time the old style, large pipe, slow circulating, gravity system and are in a position to write intelligently concerning the advantages and merits of the Honeywell system and its superiority over other methods of water heating.

HOW TO GET THE MONEY

The plumbers and fitters in the United States and Canada who are regularly engaged in the Plumbing and Heating business are requested to write us on their regular stationery with reference to their experience with the

Honeywell System of hot water heating. If Honeywell Unique Valves have been used, the fitter when writing should state fully their merits over ordinary valves and union elbows requiring connections at both ends of radiators. Reference should also be made to the new 1910 Model Honeywell Temperature Regulator, if used.

Honeywell Heat Generators are used extensively for curing faulty circulation, overcoming radiator shortage, as well as reducing excessive fuel consumption and other ailments common to the old style, large pipe, gravity system. If you have attached one or more of our Generators to old style, faulty jobs with results entirely satisfactory to yourself and customers, kindly refer to these installations stating time Generators were connected, the condition of the jobs and the manner in which they operated before the Generators were attached, as well as their operation afterwards. Give the names and addresses of the owners and any other information that would be of interest. The statements must be absolutely truthful, facts and conditions only are to be referred to and all letters must be properly signed by the writer.

DISTRIBUTION OF PRIZES

To the fitter who, in the opinion of the judges, writes the best letter, will be awarded the first gold prize. To

Honeywell Heating Specialty

1000 GOLD



*THE HONEYWELL "UNIQUE"
HOT WATER RADIATOR VALVE*



1911—How You May Get Part Of It.

the fitter who writes the second best will be awarded the second gold prize, and the writer of the third best letter the third gold prize, etc., until all prizes have been awarded.

LIST OF PRIZES

For the best letter	-	\$200.00 in gold
For the second best letter	-	\$125.00 in gold
For the third best letter	-	\$100.00 in gold
For the fourth best letter	-	\$50.00 in gold
For the fifth best letter	-	\$25.00 in gold

THE JUDGES

A committee of three responsible master fitters will be selected to act as judges. These judges will be fitters prominently known in the trade. One will be selected from one of the eastern states, one from one of the western states and one from the Dominion of Canada. The fitters who serve as judges will not be permitted to enter letters for prizes.

WE PAY ALL EXPENSES

The fitters who serve as judges will be requested to meet with us at our offices in Wabash, Indiana, on Wednesday, February 15th, 1911, at which time all letters received up to 12 o'clock noon of that date will be delivered to the judges and they will carefully consider them, make

the selections and award the prizes. The entire traveling expenses of the judges will be paid by us from the time they leave home until they return and they will be our guests while in Wabash.

WILL PUBLISH WINNING LETTERS

We request that all fitters who write us will grant us permission to publish their letters, for as soon as the judges have made their selections we will hand the winning letters to the trade papers for publication, together with the names and addresses of the judges. All fitters who write us, whether their letters win a prize or not will be favored with a souvenir, therefore we request that all of our customers and users of Honeywell equipment in the United States and Canada respond with a letter, giving their experience with Honeywell Specialties.

DON'T THINK YOU CAN'T WIN A PRIZE

Even if you have only installed one Honeywell job or attached a single Honeywell Heat Generator to an old, unsatisfactory job, your opinion of Honeywell superiority may be expressed in a manner that would command the first prize money. Let us hear from you promptly with a good letter.

Company - Wabash, Indiana



The Question Box



Subscribers are Urged to Send Questions to be Answered, or to Comment on Letters Published. Descriptions of Jobs Done or Shop Kinks are Also Invited.

TIPS ON BLOWING OFF THE BOILER.

Editor Plumber and Steamfitter,—Seeing that you are now running a department in which the mechanical part of the business gets due consideration will you not get out a list of the points relating to the blowing off of a house steam boiler, so that I can frame it up in the shop?

Montreal, Jan. 17.

H.H.

1. Blow the boiler off several times after it has been first installed, and once a month through the heating season. It will work much more to your satisfaction if you follow this practice.

2. When starting the job, see to it that the radiator valves are closed, as in that way steam will be gotten up much more quickly.

3. When you start, make sure that the water glass is about half full.

4. Make up a light wood fire and run the pressure up to about ten or fifteen pounds; or to the extent that the safety valve will hold.

5. Now open the blow off cock, but do not pull the fire until all the water has been blown off.

6. Then pull the fire before it has a chance to melt out the safety plug. Some little quick action is necessary at this place or the result mentioned will take place.

7. Then throw open all the draft and flue doors for the purpose of cooling the boiler. It would be a mighty good time to clean the flues right now.

8. When you can hold your bare hand upon any of the inside portions of the boiler, it will be safe to let in the cold water, and not before.

9. Then you may close up the blow off cock and turn on the water supply faucet, opening up some of the try cocks on the water glass so as to let the air in the boiler work out. Opening up the safety valve will answers this same purpose.

10. Allow the water to come into the boiler until the water glass shows about two-thirds full and then shut off the supply. In some boilers the amount of water will be less than that stated while in other it may run a trifle more. We are stating the matter generally.

11. Go over the house and turn on all the radiators.

12. Then pass to the cellar and build up a fresh fire and the job should be all right for another month.—D. C. H.

An Imperfect System.

Editor Plumber and Steamfitter,—The hot water heating system in my house, which has been two years in operation, is not working as well as it might. Two rooms on one side are always poorly heated. When the radiators in all other parts of the house are quite warm, in these two rooms the degree of warmth is hardly perceptible. The first year no such difficulty arose. The house is a comparatively new structure. What is wrong?

Toronto, Jan. 24.

H.H.

It is altogether probable that there has been a slight settlement on that side of the house. A difference of a fraction of an inch will disturb the gravity in the pipes and cause trouble of this kind in the heating system. A generator would remedy the defect.—Editor.

USING LOOSE FITTINGS.

Editor Plumber and Steamfitter,—Many times the steam and water fittings come tapped out too deeply. If they are used, the chances are that the careless plumber or fitter will not set the dies to allow for this looseness and there is sure to be a leak in the work. Many times the workman has to use solid dies and so he could not do it anyway. Any kind of dope will not take up these leaks and what I want to know of you is if there is not some manner of getting around these deeply tapped fittings so that they can be used readily and not thrown away nor result in leaks when they are used. If you can suggest anything, I should, for one, be very glad to see it in the paper.

St. Thomas, Jan. 18.

G. D.

The matter of loose fittings can be quite easily adjusted if the party who has difficulty with them will make use of the following simple expedient:—Take any fitting for steam or water that

proves too loosely tapped out and screws all the way up on the pipe and remove the fitting. Now on (rather in) the thread that you have cut upon the pipe, wind a single strand of thread taken from a piece of candle wicking. Wind this strand carefully along the thread on the pipe and secure it at the end so that it will not unravel when you come to start on the fitting. Then screw on the fitting and you will generally find that it has taken up all the aforesaid looseness. If one strand does not proof sufficient to do the work, use two strands. The writer has made use of this little scheme for many years and found that it would work most successfully in about 95 per cent. of the cases in which it was made use of. After a few trials, the party who makes use of this suggestion will get accustomed to the amount of wicking to use and be able to hit it right nearly every time without having to make a second winding on the pipe.—D. C. H.

ELECTRICITY VS. STEAM.

Editor Plumber and Steamfitter,—It has been a wonder to me that we do not have more heating by means of electricity and I would like to have any information from you that you may be able to furnish upon the subject.

Brandon, Jan. 14.

A. D. J.

We do not claim to be decided authority upon this subject; but from what we have been able to find out it appears that the steam can be furnished, at present, much more cheaply than can the electricity. Admitting that the amount of coal used be the same in each instance, it would appear, from the information that we have been able to get at, that steam would deliver something more than twelve times more heat units than electricity, if coal were used to produce said electricity. Such being the case, we do not see how the electricity can be used to good advantage when it is necessary to make use of coal, as fuel, to generate the electricity through the medium of suitable apparatus.—D. C. H.

Plumbers Should Advertise During Winter Months

Trade Can be Stimulated by Effective Displays During the Dullest Seasons—Criticism of Ads. Gleaned From All Parts of the Country.

After carefully scanning the daily papers, one is forced to the conclusion that the master plumber is not a steady advertiser. Few plumbers are using printers' ink at the present time. Of course, this is a slack season in the plumbing trade and that accounts in a measure for the fact that few plumbers are advertising. The dullest season is judged by many, however, to be the time when advertising is most needed and certainly good results can be obtained by the judicious use of newspaper space at the periods when trade needs coaxing.

The ads. reproduced were gleaned from papers in all sections of the country. A marked tendency in several of them is to get away from the mere mention of the regular plumbing work and goods and to concentrate on special lines. This is probably due to the fact that little straight plumbing is done at this time of the year, with the exception of jobbing work. It is certainly an evidence that progressive members of the trade are branching out and handling side-lines. The pushing of specialty departments is undoubtedly an effective way of filling in during the slack seasons.

F. C. Kulow, Port Colborne, has quite an ambitious ad., devoted almost exclusively to gas ranges. The reading matter is well written and the arrangement good. Somewhat similar in point of purpose and reading matter is that of Wm. Traynor, Humberstone, who is advertising the sale of all varieties of stoves. While lacking somewhat in the matter of arrangement, this ad. is started with a leading sentence which possesses the quality of directness. It strikes right home. "Our stoves are always sold at bargain prices." This message would undoubtedly catch the eye of the person bent on getting a stove at a reduced price—and a majority of people who buy now are looking for reductions.

The Colbert Plumbing and Heating Co., Victoria, B.C., also have an ad. which specializes on goods rather out of the beaten track. Builders' supplies are mentioned—composition roofing, tar paper, tools, etc. This ad. is well arranged and the reading matter does not lack directness. A criticism might be voiced, however, on the score of the illustration. The stormy weather with-out is not peculiarly suggestive of the necessity for roofing and building material.

An Ad. for the Season.

The other ad. of the Colbert Co. makes a bid for the jobbing work which must always follow in the wake of cold weather. The illustration, coupled with the words "Frozen up?" at once brings to the mind of the reader the thought which it is desired to arouse. The talk that follows is direct and well calculated to make customers for the Colbert Co.

Somewhat along the same line is the double column ad. of the Hodgson Plumbing and Heating Co., Vancouver. Cold weather is not very common on that side of the Rockies and the Hodgson Co., apparently are determined to take advantage of an occasional cold snap to drive home some practical advice.

The ads. of B. Kaufman, Vernon, B. C., and R. Osborne & Sons, Newmarket, are conventional in every way, partaking more of the nature of business cards than live advertising. Of course, in both cases the space used was small and it is not possible to say very much in an ad. of limited size.

The time of year should always be

borne in mind in writing an ad. The plumber could not do better at this season than address a direct query, such as the following:

DO YOU NEED A PLUMBER?

If your water pipes are frozen up or the heating system in your home is working poorly, you should call up Main 196. We give immediate attention.

HUSTLE & CO.

When a person requires the services of a plumber at this time of year, it is generally a hurry call. An ad., such as the one drafted above, is likely then to suggest that Hustle & Co. are the people to call in when the emergency arises.

Why Not Advertise?

Too many plumbers are content at this time of year to sit back and wait for business to come to them. Why not go out after the trade? It is done in all other lines and the value of advertising during dull seasons has been most effectively demonstrated.

Price Brothers contemplate the erection of new pulp and paper mills at Riviere du Sable, Quebec, with the opening of spring. About 14,000 h.p. will be developed and a village established to accommodate in the neighborhood of 4,000 people.



Frozen Up?

Alas! Strange, but true just now in Victoria. And when things freeze, something is going to leak and you

Need A Good Plumber

Pipes should be repaired at once. Competent work and prompt service if you phone 552.

COLBERT

Plumbing and Heating Co., Ltd.
726 FORT STREET

TRY R. OSBORNE & SONS FOR

Plumbing
Furnace Work
AND
Tinmithing

3 OF OUR SPECIALTIES.

Job Work Promptly Attended to.

STOVES & TINWARE
PHONE 27

B. KAUFMAN Practical Plumber and Tinsmith

will carry a full stock of Plumbing and Sheet Metal Supplies.

Estimates freely given as to cost on Plumbing and Sheet Metal Work.
Steam, Hot Water and Hot Air Heating a specialty.
Your patronage solicited. Satisfaction guaranteed.

B. KAUFMAN
Residence and Temporary Workshop:
—Trousseau Street, next Salvation Army.



BUILDERS

We carry a full line of things you need and priced right.

Composition Roofing
Building and
Tar Paper
Paints and Oils
Mechanics' Tools
Etc., Etc.

We know they are right and recommend them to you. If you come in we'll tell you more about them.

COLBERT

Plumbing and Heating Co.
LIMITED
726 Fort St.

OUR STOVES ARE ALWAYS SOLD AT BARGAIN PRICES

A comparison of Goods and Prices will convince you that this is the only place to buy Stoves. We still have a complete line of Coal, Gas and Wood Heaters and Ranges
Champion Interchangeable Combination Range
For Gas, Coal or Wood, can be changed from one to the other in one minute. Our price for this range is only \$40.00

Wm. TRAYNER, TINSMITHING
HUMBERSTONE. AND PLUMBING

Call for a 1911 Calendar.

Were You Comfortable

during the recent cold snap? If not, it will pay you to see us re your heating apparatus. If it needs overhauling or you need a new one, see us. We employ only experts in that line.

The Hodgson Plumbing and Heating Co., Ltd.

Agents for the Peace Economy

Phone 2472

643 Seymour Street

Champion GAS RANGES

I am now prepared to show you a complete line of ranges, something new in the gas living age, it is the McCLEARY CHAMPION TWO-IN-ONE INTERCHANGEABLE. In two minutes you can change from gas to coal or back again to gas. Each one gives perfect satisfaction, and all points strong and durable, nothing to give out really, in fact we have everything in the gas range line complete.

ICE BOXES, ENAMELWARE, TINSMITHING
PLUMBING, GAS FITTING.

F. C. KULOW

Tinsmithing

Plumbing

An Official Estimate Sheet for Association

Toronto Committee Has Secured Data and Drafted Up Sheet
For the Use of Members of the Local Association.

One of the most common paths by which master plumbers stray into price cutting is that of faulty figuring. Too many men are what might be termed "ready figures"; they try to carry everything in their head and work out a contract price with no other source of reference. This way does in a great many cases, but every now and then, the ready figurer forgets something; and that means money out of his pocket every time. Cases are known where very serious mistakes of this kind have been made. It is even said that one man—generally reputed to be a good practical business man—was rather mys-

the best means of preventing omissions and mistakes in contract figuring. In many of the larger cities, official estimate sheets are in use. The matter is being taken up by the Toronto association of Master Plumbers, and information along that line has been gathered by the ways and means committee. The committee have secured copies of the sheets in use in Detroit and Buffalo and in addition have a number of lists drawn up by individual plumbers. One of the latter, that of Lewis LeGrow, Toronto, has been found to be good for practically all small contracts and the official sheet that the committee has drawn up is a combination of Mr. LeGrow's and the Detroit and Buffalo sheets. The committee report will be introduced at the next meeting of the association. If adopted, it will be put in print and copies will be issued to each member of the association.

A Lengthy Document.

The Buffalo estimate sheet is a voluminous one, covering every article that could ever possibly be needed in plumbing work. It would not, therefore, be of practical use for a plumber who figures

for the most part on the smaller contracts.

The Detroit sheet is drawn up in convenient form, the different articles being classified. For instance, the different sizes of pipe are listed as follows:

Brought Forward.....			
Extra Heavy Soil Pipe and Fittings			
ft. 8 in. Pipe.....	Branches.....	Bends.....	
ft. 6 "	"	"	
ft. 5 "	"	"	
ft. 4 "	"	"	
ft. 3 "	"	"	
ft. 2 "	"	"	

Galvanized Pipe and Fittings.			
ft. 3 in. Pipe...	Fittings...		
ft. 2½ "	"		
ft. 2 "	"		
ft. 1½ "	"		
ft. 1¼ "	"		
ft. 1 "	"		
ft. ¾ "	"		
ft. ½ "	"		

In addition, provision is made for all work that might be required, among the items listed being: cartage and car fares, street digging, cellar digging, painting or decorating, repairing and inspections. Nothing is left to chance: it is possible to provide for every emergency and to have each item specified.

After each item space is left to fill in particulars or to jot down memoranda, relative to the work.

The Examination of Plumbers in Chicago

That master plumbers should have to pass an examination before securing a certificate to carry on business, is the position taken by all who have the best interests of the public, and the trade as well, at heart. An examining system is conducted in Calgary with success. In other parts of Canada, there is a more or less active agitation toward that end, and the time will doubtless come when the idea will be pretty generally carried out.

It is interesting to note the examination systems followed out in large centres. In Chicago, the system employed has been proven by past experience to work well. Not only must the master plumbers undergo an examination in the "Windy City," but the journeymen as well.

Each person examined is given three tests—shop test, chart test, and general questions.

The shop test consists of wiping a joint. A certain time is set in which the joint must be wiped and for each minute used in excess of the fixed time, the candidate loses two points. He is also marked on the score of workmanship and neatness.

The chart test consists of setting before the applicant a number of drawings of plumbing work in a building. Some

defect is contained in the drawing and the applicant has to search out the flaws, explain them and show how the work should have been done, in accordance with the civic plumbing ordinances. In addition, he must show how the defect could be remedied. As a usual thing, ten questions of this nature are placed before the plumber and a maximum mark of 10 is given for each, thus making up the total of 100 for the chart test.

Ten questions are also asked on general practical plumbing, the marking being conducted on similar lines. The maximum mark for the shop test is 100, so that the total on the three is 300.

The marks made by the applicant are added together and then divided by three to give his percentage. To the total one point is added for every year's experience over eight years in the plumbing business.

All applicants who get over 70 per cent. are forthwith given certificates, being deemed thoroughly competent to carry on business. Those getting between 65 and 69 are not given certificates but are granting the privilege of trying again in a month's time; between 60 and 64, the candidate can come back in two months' time; 55 to 59, three months; 50 to 54, four months; 40 to 49, six months; under 40, one year.

Baths	
Closets	
Cisterns	
Basins	
Sinks	
Wash Tubs	
Boilers	
Soil Pipe	
Water Pipe	
Local Vent	
Waste Pipe	
N. P. Pipes	
In Bend	
Closet Seat	
S. P. Fittings	
Boiler Coupling	
Boiler Stands	
Traps	
Cocks	
Plugs and Chains	
Thimbles	
Cleaning Screws	
Closet Connections	
Sheet Lead	
Hydrants	
S. C. Keys	
Solder	
Excavating	
Stove Connections	
Gas Fitting	
Time	
Sundries	

An estimate sheet used for some years back by Lewis LeGrow, secretary of the N.A.M.P.—It was found effective for practically all classes of work.

tified at the low total that he reckoned for a certain job. After the work was done, he found that he had lost heavily and started in to find just why his figures had been so sadly astray. Luckily he found the sheet of paper on which the reckoning had been done and, on checking over the items, was considerably chagrined to find that he had actually neglected to include the price of the bath tubs! Such a mistake may sound too ridiculous to be possible and yet the instance quoted is an actual experience. Furthermore, the best of the ready figurers are liable to make mistakes equally obvious and glaring at any time.

The use of an estimate sheet is one of

Methods Adopted to Remodel Plumbing

How One Man Went About the Task of Improving an Unsanitary System Without Taking Out the Partitions or Floors.

It is a common experience for plumbers to face the problem of remodeling faulty plumbing. The following account of how one plumber solved a knotty problem of that kind, appeared in *The Metal Worker, Plumber and Steam Fitter*, and will be of interest to all members of the trade:

Having been called upon to overhaul a plumbing job that had been in use about 16 years, which included two bath rooms, kitchen sink, and wash trays, I believe the following account of what was found and what was done will be of interest to some plumbers.

As the house was occupied, I could not tear all the fixtures out, and the owner decided to have the bath rooms remodeled first. There was one bath room on the first floor and the other directly over it on the second floor. The fixtures in the second floor bath room consisted of a pneumatic syphon closet, a copper-lined, cased-in bath and an Italian marble lavatory, also cased in, which I did not remove. I took out the old fixtures and the floor, preparatory to installing the new work, and found some queer plumbing.

The main vent stack, shown in Fig. 1, had been reduced to 3-in. wrought iron pipe after leaving the last fixture, and about 2 ft. above the floor it had been tapped and threaded for 1-in. pipe. A short 1-in. nipple and a 1x3/4-in. reducing ell were screwed into it. From this ell a 3/4-in. pipe was taken under the floor as far as the lead bend for the closet, and there a reducing tee had been put on, and a 1/2-in. branch was taken to the lead bend of the closet, and also to the crown of the bath trap for a counter vent. The owner would not let me tear out the piping in the partitions, therefore I had to do the next best thing.

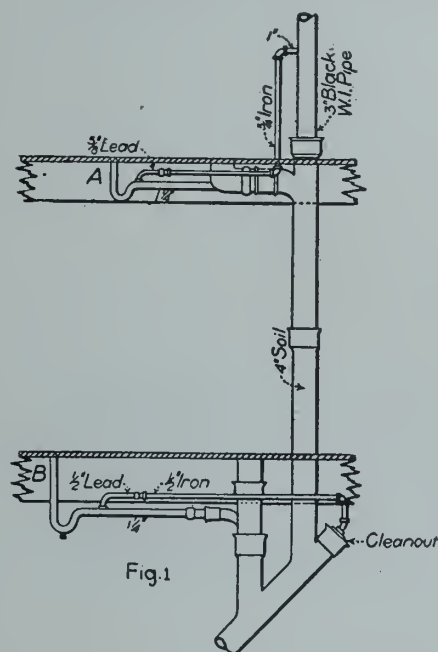
The new fixtures consisted of an "Argus" low tank, a syphon-jet closet with a vitreous china tank and a solid mahogany seat, and a 5-ft. iron enameled bath tub, decorated outside and supplied with the improved top nozzle fixture made by Peek Brothers & Co. As the closet was of the syphon-jet pattern and situated close to the stack, I did not think it necessary to vent it.

I took the reducing ell out of the vent stack and put a 1-in. ell in its place. As I had to vent the first floor bath trap, I continued the 1-in. pipe to the first floor, providing a 1-in. branch for the second floor. As there was available nothing but a 1-in. vent connection, I decided to use large-size drum traps for the bath tub, using 1 1/2-in.

lead pipe for waste, and close to the outlet I wiped a piece of 1 1/4-in. pipe with a 1-in. solder union to connect to the 1-in. iron.

After the new floor was laid and the fixtures set in place, I turned my attention to the lavatory. I found that the waste pipe was of 3/4-in. lead, run into the cellar and connected to the main waste pipe. The trap was a 1 1/4-in. "Sanitas" without vent. Here was a problem. I could not tear out any partitions, neither could I run any pipes in the rooms.

After carefully studying the situation, I decided to take out the 3/4-in. lead



pipe and replace it with 1 1/2-in. galvanized iron pipe. I then used a common P trap, branched into the waste pipe with a Y, and from the top of the Y a short piece of pipe with a McClelland vent was run to the under side of the slab. As will be seen in Fig. 1 at A, the waste from the bath had been connected to the heel of the lead bend, and, not having room to put in 4x2-in. fitting, I used a 4-in. brass ferrule with a 2-in. Y connection.

Having finished the second floor bath room, I took out fixtures in the first floor room, and found conditions even worse than in the second floor bath. As will be seen in Fig. 1 at B, a 1/2-in. galvanized iron pipe had been connected to the clean-out near the ceiling in the cellar, and branched into the lead bend and the crown of the bath trap, presumably for a back vent. The new fixtures in this bath room were the same as the second floor, except the bath, which was an enameled iron foot.

A COMPLIMENTARY BANQUET.

Manager John McLaren and Superintendent Harry Ledding of the Canadian Brass Co., Galt, tendered their employes, foundrymen and salesmen a banquet at the Hotel del Monte, Preston, as a token of their gratitude for the success of the past year, to which the good work of all had contributed largely.

The guests gathered at the works about eight o'clock and from there proceeded to Preston in three sleigh loads. In the middle sleigh was a "Gazook" band, which made considerable noise. A splendid repast was served, followed by a program of "song, story and oratory," over which Mr. Ledding presided.

The toast list was started with "Manufacturers of Galt," responded to by E. J. Getty, president of the Canadian Brass Co. He told of the rapid growth of the company, from a very small concern until at the present time there are between fifty and sixty men on the pay roll.

Master of Ceremonies Ledding spoke of the splendid progress the company had made in replacing imported goods. At one time, American companies supplied Canadian plumbers almost entirely but now the Galt-made product is found everywhere.

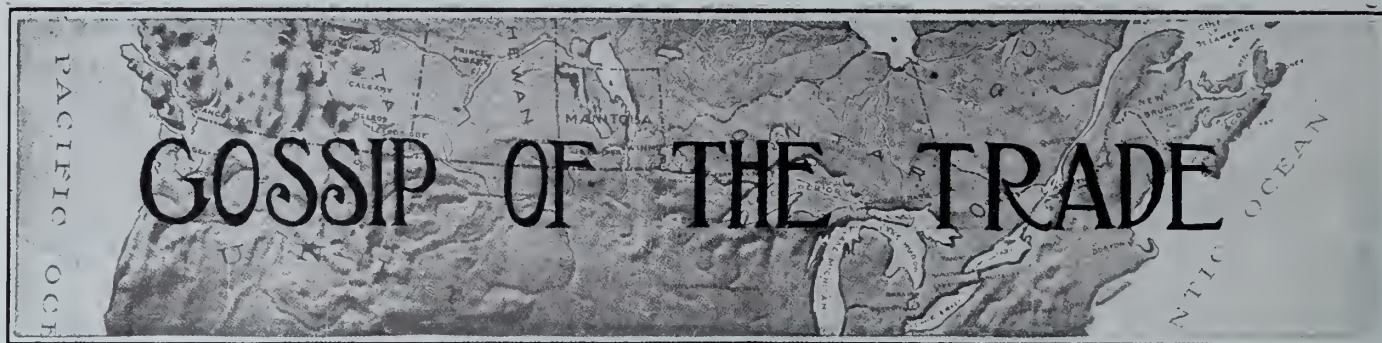
Vice-President F. S. Scott spoke to the toast, "The Industrial Future of Canada." M. McLaren, one of the travelers spoke on "Difficulties of a Traveling Man's Life." A number of the employes spoke briefly, namely, Messrs. Larter, Rancourt, Welland, Sangsten and Melville. Last, but not least, Manager John McLaren spoke, telling of the rapid advance of the company and the splendid prospects for the future.

The rest of the program consisted of solos by Howard Henselwood, Wm. Parker, Kay and Wolstenholme, a duet by Percy Kay and Leonard Howard, a piano solo by Leonard Howard, selections by the Gazook band, and buck and wing dancing by Messrs. Stevens and Kempthorne.

The affair, which passed off very smoothly, was an innovation for which the two gentlemen, who originated the idea and carried it out are to be commended.

FOR A COMFORT STATION.

Councilman George W. D. Upton, Springfield, Mass., who has just been returned to that body after several years' absence, has taken up the agitation for a public comfort station which he started when a member of the council 11 years ago. The lapse of more than a decade has only strengthened Councilman Upton's conviction that the city needs such a station and he declares that he is going to do all in his power to see it provided before he leaves the board again.



The assets of Martin & Tremblay, plumbers, Montreal, have been sold.

A. Hewitt & W. Macey, plumbers of Vancouver, have dissolved partnership.

McMurphy & Craig, plumbers and steamfitters, New Westminster, have dissolved partnership.

Mrs. McCreight, of the Arlington hotel, Red Deer, Alta., has closed a contract with Smith & Gaetz for the installation of a steam-heating plant at a cost of \$3,000.

Goes to Saskatoon.

F. A. Cowan, Toronto, is leaving for Saskatoon, where he is taking up a plumbing business. He is not only a good plumber, but an expert euchre player as his recent success demonstrates.

Master Plumber Deceased.

Edward Blake, of the plumbing firm of G. & E. Blake, St. John, N.B., passed away after a long period of ill-health. He was a widower and was held in highest esteem by a wide circle of friends and business associates.

A New Factory.

Messrs. Howard and Cluff, representing the Steel & Radiation Co., Ltd., have signed an agreement with the St. Catharines city council to erect a new factory on a site near the new Welland Canal, next to Jenkes' machine factory.

Finger Amputated.

Fred Daw, of Toronto, has had the first finger of his right hand amputated, as a result of blood poisoning. He was out at the last meeting of the association with his hand bandaged, but asserting that he felt quite well again, and almost ready to start work.

Opening an Agency.

James Martin, representative of Crane & Co., wholesale plumbing and gas fitting house, with headquarters in Chicago, has been transferred from Nelson, B. C., to Revelstoke. It is reported that in the near future, a full stock of that firm's goods will be put in at Revelstoke. Mr. and Mrs. Martin have taken up their permanent residence there.

Building Comfort Station.

Victoria, B.C., is to build a public comfort station at the northwest corner of the causeway and a call is being made for tenders. The station will cost in the neighborhood of \$20,000.

Partnership Dissolved.

Cline & Light, plumbers and tinsmiths, Aylmer, have dissolved partnership, and, as soon as the business of the firm can be wound up, Mr. Cline will move to Flint, Mich., where he will start in business. Mr. Light will carry on the business in Aylmer.

Constructing Drain.

A sewerage and waterworks drain is under construction from the Herriot street main to the Winn factory, says the Perth (Ont.) Courier. The heating apparatus is all in ready for use, and the waterworks plumbing is the next thing to be undertaken. The material for the hardwood floor on the lower flat is in the building ready for laying down.

Fair Wage Schedule.

The minimum fair wage schedule, acknowledged by the Manitoba provincial government and the Winnipeg council on all public works for the coming year, is as follows: plumbers, 55c per hour; tinsmiths, 42½c; steamfitters, 55c; stonecutters, 60c; carpenters, 45c; plasterers, 55c; lathers, 50c; painters, 40c; electricians, 40c; builders' laborers, 27½c; ordinary laborers, 25c; team and wagon, 50c; team drivers, 25c; structural ironworkers, 40c.

Master Plumber Killed.

Jean Labbe, a Montreal master plumber, was struck by a street car at the corner of St. Denis and Bienville streets. Falling into the fender, he was carried along for a distance of about fifteen feet before the car could be brought to a standstill. He was taken to the General Hospital where he died soon after. It was found that his skull had been fractured. He was 22 years of age and unmarried, being in business with his two elder brothers, Alfred and Louis Labbe.

J. A. Morden, a Rivers, Man., hardware and plumbing man, has obtained the contract for the heating and plumbing of the new hotel in Transeona.

An Oyster Supper.

The Plumbing Society, Prescott, held their annual oyster supper at the home of Mrs. J. Steele, on Tuesday evening, Jan. 10, 1911. All the members with the exception of three, were present, and a number of visitors. After ample justice had been done to oysters and other good things provided by the ladies, the evening was spent in games, music and social chat.

Big Contracts Let.

The Calgary school board has let a number of contracts, including the following: Grant Bros., for plumbing and heating in addition to High School, \$11,616; Marrs Plumbing Co., for plumbing and heating in Mission Bridge school, \$12,934; E. J. Young, for plumbing and heating in 12-room school at Hillhurst, \$17,745; W. Head, for plumbing, heating and ventilation in 12-room school near Col. Walker's estate, \$18,036.

Plumbers Booked Up.

Its an ill wind that blows nobody good. The plumbers have been more than busy during the past few days. Water pipes and sewerage pipes were frozen up in many homes; and in some houses the meals had to be cooked on oil stoves because of frozen water-fronts. One Summerside man who found everything frozen hard and fast when he arose on Tuesday morning, tried to break the speed limit in the effort to reach his plumber, only to find when he got to his destination that there were eighteen calls ahead of his!—P.E.I. Agriculturist.

Not Paying City.

The steam pipe between the city hall and the power house which has been out of commission for some time will be completed to-night, and the heat turned on again to-morrow. The question of municipal heat is one that is greatly agitating the minds of the aldermen these days. It is safe to say that the heating is not going to pay the city, and several of the users are making a great big kick over the extent of their bills. In fact, it is even hinted that the city may have to go to law to collect some of the accounts.—St. Thomas Journal.

Output of Factory.

The new factory of the Standard Sanitary Mfg. Co., at Toronto, is now being operated by a larger staff, although the full number of hands are not yet employed. The output is gradually increasing both in variety and extent.

New Firm Starts.

The store recently erected by Davison & McInnis, Woodstock, is now occupied by them. It is a fine structure and a full line of hardware and plumbing supplies is carried. The firm consists of Geo. Davison, formerly of McKiggan & Davison and Lorne McInnes, formerly head plumber with E. S. Coppins.

Fell 130 Feet—Lives.

William Armstrong, a plumber living near Auburn, a village about 12 miles from Goderich, fell from the top of the Western Canada Flour Mills Co. elevator, Friday morning, taking a drop of about 130 feet, and still lives to tell the tale. Armstrong was working with a roofing gang on the new building. He was not accustomed to working at any great height, and probably became dizzy. The footing on top was also very slippery as there was a light rain falling. When picked up after his drop Armstrong was conscious and spoke frequently on his way to Alexandra hospital, where his injuries were attended to. His left arm was fractured and he had several minor injuries, but the 130-foot fall seemed to have done him no greater harm and his physicians report him as having an excellent chance for recovery.

New Company Organized.

The Western Foundry & Metal Company, Calgary, has taken over the wholesale department of the Woodhall Metal Company which is composed of a full line of sheet metal goods. In addition to this line, they will carry a full line of heating goods. The company is erecting a brick warehouse on the corner of Seventeenth Avenue and Eleventh Street East, Calgary, which will have a floor space of 30,000 square feet, with a private loading platform at the rear. The officers of the company are:—P. S. Woodhall, general manager; George A. MacKenzie, sales manager; A. J. MacWilliams, credit manager. The company will conduct a strictly wholesale business, and will be in no way connected with the Woodhall Metal Company, who will continue to carry on their manufacturing and concreting business.

Won Euchre Prizes.

The third social of the Toronto Master Plumbers' Association was held on Friday evening, January 20, with a larger number on hand than at previous events of the same order. Euchre occupied the early part of the evening and, at the con-

clusion of the games, the scores of the three evenings' play was totalled up. It was found that the winner was F. A. Cowan, with a score of 23. Frank Pepper came second with 19, and W. G. Mimms secured the "booby" prize with the handsome total of 4. Chairs were then gathered up to the board, on which Chairman Passmore and his energetic committee had assembled a most bountiful repast. The refreshments were quite up to the standard set on previous occasions, and the coffee, although brewed by masculine hands, was A 1. An innovation was introduced when each member was asked to either sing, make a speech or tell a story. The only one who attempted to sing was Bob Sherlock, and his vocal numbers scored such an instantaneous hit that none others essayed to warble for fear that they would suffer by comparison. The rest either gave an impromptu speech or told a story—the majority resorting to anecdotes.

A SIGN OF PROSPERITY.

Prosperity is always waiting outside the door for the plumber who knows his business and is willing to conduct his affairs on a business-like basis. In the present case, prosperity is represented by an automobile—a pretty sure sign of prosperity, when one considers the



cost of gasoline, repairs, fines, etc. E. J. Young, plumber of Calgary, is an aggressive member of the trade and has well merited the success which he has achieved. The accompanying illustration shows the premises formerly occupied by Mr. Young. He has since removed to a larger and more commodious store.

PRIZES WERE GIVEN.

At the regular meeting of the Association of Master Plumbers, Toronto, on Thursday evening, Jan. 27, there was an overflow attendance. A number attended who had been absentees for many months, and some were there for the first time. Considerable routine business was transacted, and a number of topics of general interest were discussed. The prizes won at euchre during the season's social evenings, were given out as follows:—F. A. Cowan, gold-headed umbrella; Frank Pepper, pearl-handled pen knife; W. G. Mimms, solid brass rule.

GOOD SYSTEM IN SCHOOLS.

The plumbing system in the schools recently completed in Woodstock, Ontario, is pronounced to be second to none. The ventilation is good, a large fan blowing the air over the furnace into the rooms. Sanitary drinking fountains have been installed. E. A. Coppins carried out the plumbing contracts.

A UNION SMOKER.

The Sheet Metal Workers' Union Local No. 30, held its annual "smoker" at the Labor Temple, Toronto, Monday night. An excellent musical program was rendered by members of the union. As many non-union men were present, advantage was taken to do a little organization work. W. Glockling, president of the Dominion Trades Council, and John Flett, Canadian organizer of the A. F. of L., gave addresses on the benefits to be derived by joining the trades union movement, with the result that a number of new members were secured who will be initiated at the next meeting of the union. J. H. Kennedy presided.

THE TRADE IN THE WEST.

Frank T. Murdock, of the Vulcan Iron Works, Winnipeg, agents for the Taylor-Forbes Co., is in the east on a trip, on which he is combining business with pleasure. He has visited Toronto and Guelph, among other points.

"The plumbing trade is growing wonderfully fast in the West," said Mr. Murdock, to Plumber & Steamfitter. "We come in contact with members of the trade very largely in the sale of radiators for steam heating and find that the western plumber is thoroughly up-to-date. The heating work in the West is splendidly done in practically all cases."

Mr. Murdock commented on the rapidly widening scope of the steamfitting trade. Practically every building of any size now put up in the West is steam heated and the field for the plumber is growing larger very fast.

A LARGE CALENDAR.

Plumber & Steamfitter is in receipt of a calendar from the Carborundum Co., Niagara Falls, of unusual size. It gives a realistic view of the Falls in the middle of winter.

The following building permits have been issued recently in Winnipeg: Permit for a steam turbine power station to be erected by the Winnipeg Electric Railway Company on Mill street, \$72,000. The Crane-Ordway Company, Limited, will spend \$35,150 for additions and alterations to its warehouse on the east side of Lombard street.

New Buildings, Water and Sewerage Systems

Opportunities Offered by Municipalities and Private Enterprise for New Plumbing, Heating, Ventilating or Sanitary Systems—Work Being Undertaken in Every Section of the Dominion.

Municipal Undertakings.

Goderich is to spend \$16,000 on an extension of the sewer system.

Regina has decided on the overhauling of the present system of water supply.

Moncton, N.B., proposes to spend \$230,000 on the improvement of the water supply.

The proposed gravity water line, to Letbridge, Alta., 43 miles long, is estimated at \$880,000.

Plans are being prepared for the proposed sewage disposal plant at Simcoe, Ont., which is to cost \$50,000 to \$60,000.

Pembroke has adopted a by-law to raise by debenture the sum of \$65,000 to extend the intake pipe of the water-works system.

Mayor Hopewell, of Ottawa, in his inaugural address, advocated the purchase of water power for the municipal light and power plant.

Vancouver ratepayers have authorized the issue of debentures for the following work: Street improvements, \$425,000; water works extension, \$400,000.

Work to cost \$750,000 will be undertaken this year by the Ottawa municipal engineering department. The chief work will be the western drainage system, which will cost \$300,000. The drainage of the Dow Lake district will cost considerably over \$100,000.

Public Buildings.

Edmonton is to have a new trial hall to cost \$50,000.

Victoria, B.C., has selected the sites for two new fire halls.

A new Y.M.C.A. building is to be erected at Fort William, Ont.

The Methodist church at Odessa, Ont., was destroyed by fire, loss \$20,000.

Port Arthur, Ont., is to spend \$12,000 on additions to the present town hall.

The sum of \$92,500 is to be spent in improving the Engineers' Club building, Montreal.

A campaign for the raising of \$50,000 for a Y.M.C.A. building in Guelph has been started.

Plans have been accepted for the proposed Emmanuel Divinity College at Saskatoon, Sask.

Middlesex County Council is considering the extension of the court house at a cost of \$10,000.

Prince Albert, Sask., ratepayers have authorized the expenditure of \$8,500 on a high school addition.

Plans are out for a new machinery hall in connection with the Central Canada Exhibition at Ottawa.

London City Council is considering the erection of a new city hall, to cost in the neighborhood of \$150,000.

A cold storage plant is to be erected at Brandon, Man. Plans are being prepared by T. Sinclair, architect.

The Cardston, Alta., Board of Trade is moving for the establishment of a hospital. A site has been given.

A permit has been granted for the Mount Royal College at Calgary. The specifications call for a \$45,000 building.

The Third Avenue Methodist Church, Saskatoon, has disposed of its present site and will build farther out from the business section.

There is some talk of an extension to the St. Francois Xavier College, Antigonish, N.S. A new wing is to be added to St. Martha's College Hospital.

Tenders will be called shortly for the new hospital at Brandon. The structure will be 372 feet long and 150 feet deep, of brick and stone construction.

A number of small buildings, to cost in the neighborhood of \$80,000, will be built at the Homewood Sanitarium to replace the structure recently destroyed by fire.

The plans for the new departmental building to be erected in Ottawa on Mackenzie avenue are nearing completion and tenders will be called for shortly.

The first draft of plans have been prepared for the new students' club building in connection with the University of Toronto. The estimated cost is about \$300,000.

The destruction by fire of one of the buildings at the Homewood Sanitarium, Guelph, caused a loss of \$75,000. It is to be replaced on a more elaborate scale than before.

Recent Government estimates passed include \$19,000 for a post office in Maisonneuve, P.Q., \$15,000 for one in Marieville, P.Q., and \$5,000 for improvements of the post office at Aylmer, P.Q.

Among the buildings projected at Macleod, Alta., are a new \$35,000 hospital, a new \$10,000 post office, and a new \$4,000 municipal building, to include police and fire department accommodation.

It is possible that the John K. Stratford Hospital at Brantford will be pulled down and a new building erected at a cost of \$100,000. Plans have also been prepared for remodeling the building at a cost of \$65,000.

Vancouver has authorized the issue of debentures for public improvements to-

talling \$2,525,000, and voted down proposed expenditures totalling \$946,000. The objects approved are as follows: Schools, \$967,000; hospitals and lands, \$286,500; Exhibition Purposes Association, \$115,000.

Samuel Hooper, Manitoba provincial architect, is preparing plans for new government buildings to cost over \$5,000,000, according to estimates. These buildings include new legislative buildings, a new agricultural college and a new asylum at Brandon to replace that destroyed by fire about a month ago.

According to the estimates which have been placed before the Provincial Legislature \$515,000 will be expended towards the completion of the new Parliament buildings at Edmonton; \$140,000 will be expended to complete the new Court House, and \$50,000 is granted for a site and building for a new Land Titles building.

General Building.

The C.P.R. will complete the west wing of the station at Calgary this year.

W. D. Morrison is preparing plans for a large warehouse in Vancouver to cost \$65,000.

The Bell Telephone Co. will erect a new exchange at Owen Sound, to cost about \$23,000.

A permit has been issued to the C.P.R. for a 2-storey brick station at West Toronto to cost \$20,000.

The Shevlin-Clark Co. are building new mills at Fort Frances, Ont. Work will be finished by June 1.

The British Columbia Telephone Co. is planning to erect an exchange building at Nelson, to cost \$10,000.

The Canada Rubber Co. have taken out a permit to erect a factory costing \$250,000 on Monarch street, Montreal.

W. J. McNamara of Wetaskiwin, has purchased property in Strathcona, Alta. and will erect a residence costing about \$20,000.

A building permit has been issued to Dr. W. Moody for a three-storey apartment house, 1672 Georgia street, Vancouver.

Arrangements have been completed for the erection of a hotel on Sherbourne street, Montreal, by the Ritz Hotel Company.

A five-storey hotel is to be built in Edmonton on the site of the present Grand Central Hotel, at a cost of about \$100,000.

Norcross Bros., contractors and importers, Iberville, Que., who were recently burned out, will commence rebuilding at once.

Newspapers state that Mr. C. H. Lilly, president of the C. H. Lilly Company of Seattle, wholesale miller, grain and seed dealers, will establish a branch at Vancouver, and possibly erect in the near future a milling plant.

PLUMBING AND HEATING MARKETS

MONTREAL.

Montreal, Jan. 30.—Trade in plumbing lines is fairly good for this time of the year, but the season itself is generally considered to be rather dull. Plumbers are in many cases not through with their stock-taking duties. Stocks have probably been allowed to decline and it should not be long until the demand for new goods is felt in no uncertain measure. Locally it is felt that there is some of last year's work in that which is now being done, but at any rate there is some activity. It is said by large plumbers that the extent of the work now being carried on is considerable for the season and a good year is expected as at present the prospects are for greater activity than ever in the building trades.

Tin has been advancing steadily and is now quoted at 47 cents a pound. Some expect that it will rise to 50 cents, but others are inclined to think that the limit may be reached before that figure.

Soil Pipe.—Demand is normal for supplies in this line. The fact that there is some enquiry at this season is worthy of note. Quotations for medium and heavy are 70 and 10.

Lead Pipe.—Business continues to come in and orders are said to be quite satisfactory. Prices are unchanged: pipe and waste, 9c per lb.; calking lead, 4½c; traps and bends, 50c.

Solder.—This market is decidedly firm in sympathy with the situation in tin. There are some who think that with any increased demand under present conditions the price may undergo an advance.

Iron Pipe.—The market is practically unchanged. The demand is fairly good and the number of orders coming in have been satisfactory. Prices are unchanged: ½-in. black, 63; galvanized, 48; ¾-in. black, 59; galvanized, 44; 1-in. black, 69; galvanized, 59.

Radiators and Boilers.—The demand for these lines is good, giving evidence of considerable work in prospect. Quotations are 60 and 5. Round hot water boilers 50 and 10; hot water radiators, 50 and 7½; steam radiators 50 and 7½, and 2½ per cent.

Metals.—Tin has been active since last referring to it and several advances have occurred in the interim. It is now quoted at 47. Copper, while rather weak for some time past has shown a slight indication of strength, but it is very slight.

TORONTO.

Toronto, Jan. 29.—There is a dull tone to the market, but this condition

is quite to be expected at this time of year. Jobbing work keeps the trade pretty well occupied and, in consequence, the supply houses are not receiving many orders. Prospects for the future are considered on all hands to be good and the present dullness is not accepted as in any sense pointing to slack trade conditions generally.

Price changes are noted this week in solder and iron pipe and fittings. The soaring tendency of tin is having its effect on solder and two increases have been made in the price during the past two weeks. For iron pipe and fittings some reductions have been made.

Enamelware.—The demand has become almost nominal and orders are rather rare; still, the trade is a little more brisk than for the same period last year.

Boilers and Radiators.—That some work in the heating line is being done still is evidenced by the fact that orders continue in receipt. The demand is not large, of course, but it is undoubtedly larger than during the latter part of January, 1910. The open weather has had a great deal to do with the unusual prolongation of boulding work and has enabled the steamfitting industry to be followed out longer and more continuously than is usual.

Soil Pipe.—The demand for soil pipe has reached the minimum stage, as practically no outside work is now attempted. Medium and heavy is quoted at 70 and 10; 7 and 8-inch sizes, 50 per cent. There is no change in fittings which stand at 70 and 10 off.

Lead Pipe.—There is little demand and prices are remaining firm. Lead waste sells at 9c per lb. and calking lead at 1½c per lb. Traps and bends are quoted at 50 per cent.

Solder.—With tin constantly on the rise, solder is becoming dearer. During the past two weeks, two increases have been made and prevailing quotations for half-and-half are 21c to 23c, although one price given to-day was as high as 25c. Wiping has also gone up and sells from 19c to 23c, the highest quotation being given in several cases to-day. If tin continues to go up, there is every likelihood of corresponding advances in the price of solder.

Iron Pipe and Fittings.—An easier tendency is shown in several lines. The discounts on cast iron fittings are given from 65 to 70, a reduction of 5 per cent. in some cases. Malleable fittings stand the same at 37½ to 40 per cent. Cast iron bushings stand firm at 70, but malleable are quoted at 67½, a reduction of 2½. Nipples are quoted at 75 and 10; headers, 60; flanged and malleable-lipped unions, 65 per cent. Gal-

vanized pipe has gone down from \$6.35 to \$6.18, and black pipe is now quoted at \$6.53 per hundred feet, 1-inch size; the latter quotation being a reduction of 17c.

Metals.—The feature of the market is the regular advance in tin. The price has been steadily advancing week by week and is now at a record-breaking figure. Other metals are remaining firm, there being a good all-around demand.

CHANGES IN PRICES.

Radiator prices in the United States are due to see an advance, according to advices received from the other side. The Metal Worker says:

"Selling radiation on a different basis which carries with it an advance in price is one of the factors of cost which must receive consideration in making up estimates for heating systems since the New Year. The base price remains the same, but the discounts are changed. Heretofore steam and hot-water radiation in all columns has been subject to the same discount. Now there is a point of difference in the discount in favor of steam over hot-water radiators, doubtless to cover the cost of the necessary top and bottom connections. Then there is one point in the discount in favor of three and four-column radiation over two-column, there naturally being a greater proportionate cost to the selling price in assembling the two-column radiator. The discount on single-column radiation is almost 8 points less than on three and four-column radiation. The change coming at a time when old contracts are being completed, it has no influence on them and the notice gives ample opportunity to make a careful study of the effect of these several new discounts on new work and to govern all estimates accordingly. This from the dissatisfaction reported during the past year is a much-needed step, for from any comparison with other foundry product it has been claimed that radiation was selling too low. Again, it is improbable that the advance will bring any considerable profit to the makers, it being reported that the demand is increasing for radiators of screw-nipple construction, which are something more costly to produce."

A CIVIC CALENDAR.

The city of Winnipeg has sent out a large calendar featuring that place as the hub of industry, to which all roads lead. It is very cleverly arranged, and contains a handy index of information, relative to Winnipeg, aptly termed, "an open book of opportunity."

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BOX 1073, PLUMBER AND STEAMFITTER, TORONTO (5)



R. R.

If "RESTING IS RUSTING" don't buy a "Vulcan-Bijaw." "A slow man is not much better than a dead one, but takes up more room," and a "Vulcan" is not made for rest.

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Every "Vulcan-Bijaw" made from wrought steel and machined forgings, interchangeable and absolutely guaranteed against imperfections or mechanical faults. Chain tool circular free.

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Plumber and Steamfitter receives, from time to time, enquiries for the names of manufacturers of various lines. These enquiries come from firms who usually intimate they have looked through Plumber and Steamfitter but cannot find any firm advertising the line in question. In many cases these firms are anxious to secure the information at once. This page enables manufacturers to keep constantly before the trade lines which it would not pay to advertise in larger space.

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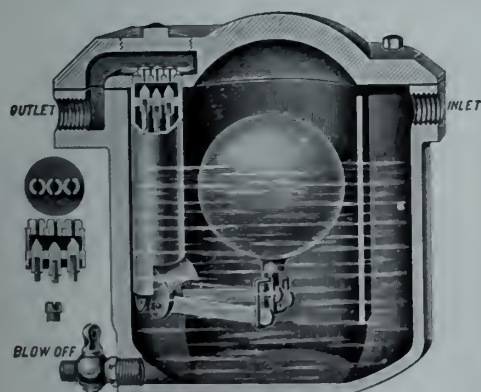
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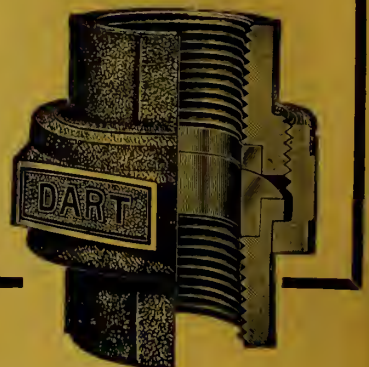
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have two bronze-seated sections which meet in a bronze-to-bronze ball joint and stand no more chance of leaking than if it were all in one piece. For unalloyed satisfaction use Dart Unions.

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Vol. V.

Publication Office : TORONTO, FEBRUARY 15, 1911.

No. 4

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PORT HOPE, CANADA

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under the British Flag



PORCELAIN ENAMELED
SANITARY WARE



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"A form, type, example, model, used as a basis of comparison."

Ideal

A standard of desire.

An ultimate object or aim.

A mental conception of what is most durable.

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Famed for its Smoothness, Colour and Wear



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All Jobbing Houses

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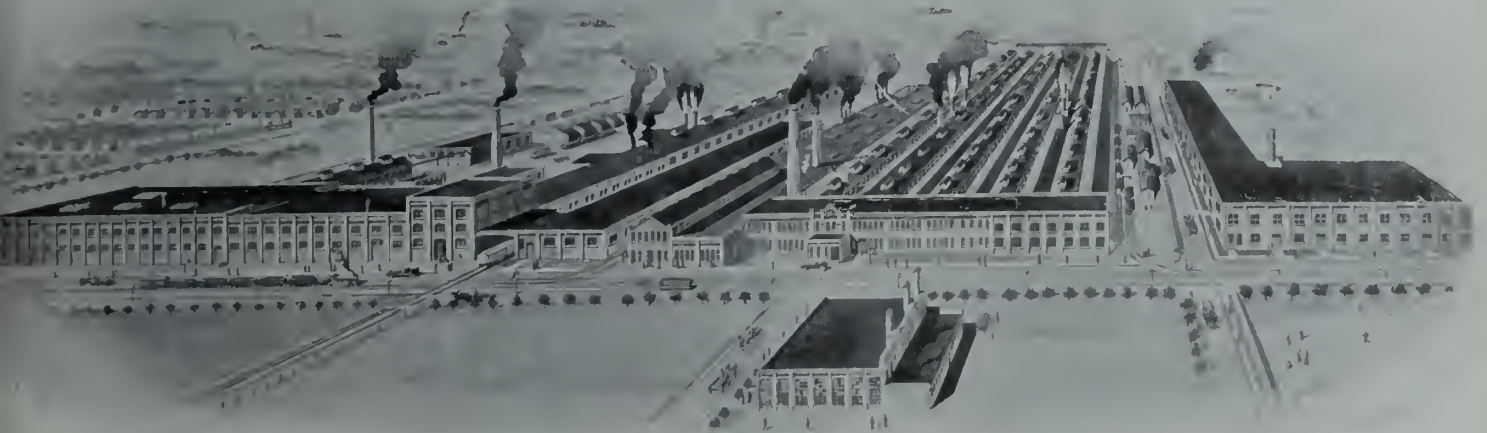
Hot Water Installations Throughout Canada

Upon no other point are Architects, Steamfitters and Proprietors so well agreed as on the merits of the Honeywell System.

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You can please your
customers and build
up business

by handling a real
quality line like the



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There are never any 'kicks' or repairs necessary once you have installed the "EMPIRE"—just solid satisfaction the year round. Tank is extra large, *giving a good flush*, and seat is special hard-wood and *will not split or crack*.

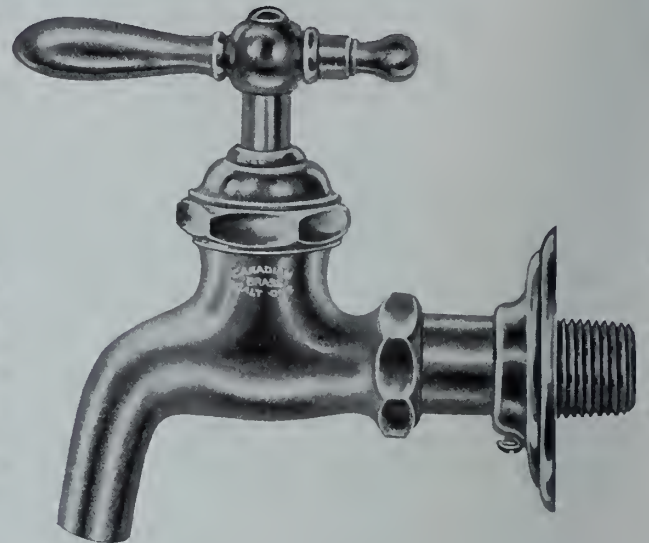
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"Canadian Quality" Quick Opening Work

It gives "absolute satisfaction."

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Each piece bears our name,
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We are the original manu-
facturers in Canada.

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ONTARIO

Out in a Little Town in Ontario There was a Rummage Sale!

I'M
NYE
the Die
Man

The deacon's wife called at a dilapidated cottage and asked the worn and sickly little wife if she had anything to contribute!

"Yes," replied the woman, sadly, "come around this evening and get my husband!"

There are thousands of plumbers and gasfitters in Canada who have a lot of poor tools that they would like to give to a rummage sale. And these tools cost them a lot of money, too, money that was earned by earnest, sweaty work—and they not only cost money, but sometimes they made the user swear!

Did you ever stop to think why there are so many tools of this character about the country?

It is because manufacturers make tools to sell. They have in mind only the one thing—to turn out tools that will bring in money. Naturally, they aim to make a reasonably good tool, one that will pass muster—but with me it has always been different.

I am making the best tool that brains and money can make—and letting the tool sell itself. In my shop we are striving not to make tools that merely will pass muster, but tools that will never be equalled by any other factory. I believe that it pays not only in dollars and cents but in satisfaction to turn out a product that excels your competitors! Any fool can make a pipe die—but it takes more than brains to make a Nye Die. It takes a desire to be square, to buy the best steel and the best workman and the best mechanism and unite them—not to make money alone—BUT TO MAKE DIES THAT LEAD THE WORLD.

It is fashionable, now-a-days, to advertise that certain dies are as good as Nye Dies—but nobody has come across yet with the proof that their Dies equal the Nye Die, and until somebody proves their goods, I shall continue to carry the banner of the Nye, the Die Man.

THE NYE TOOL AND MACHINE WORKS, 124 North Jefferson St., Chicago, Ill.

LEAD PIPE



1-8 to 8 INCHES

Notice—Plumbers

WE MANUFACTURE

Lead Pipe, Lead Waste, Hydraulic Drawn Traps,
Non-Syphon Centrifugal Cast Traps, SOLDER FOR
ALL REQUIREMENTS.

Our prices would interest you. Write us.

The Canada Metal Co., Ltd. - Toronto

Flanged Elbow

REMARKABLE TESTS

which speak volumes for the
superiority of

STANDARD S FITTING!
BRAND

At McGill College, Montreal, our 1½ inch Screwed Elbow, guaranteed for 125 lbs., broke at 5000 pounds pressure, and our 3 inch Flanged Elbow, guaranteed for 125 pounds, could not be broken, the packing blowing out at 2800 pounds pressure.

Think what this enormous strength means in point of safety. We make **CAST IRON FITTINGS**, all sizes, for Steam, Gas, Oil or Water. Write for details.

STANDARD FITTING & VALVE CO., Limited - GUELPH, ONTARIO

Reducing Flanged Tee
Reducing in Run or Branch



Try a business card in
Plumber and Steamfitter

IT WILL PAY YOU

positions there. You may find just what you want.

to watch our Condensed
Ad columns. There
are many money-making



TESTED AND GUARANTEED

Not only do we apply every possible test to each completed **KING RADIATOR** that we may detect and preclude any chance of leakage, but we **guarantee** each radiator to contain the actual amount of radiation surface catalogued. This means that in installing

"KING" RADIATORS

Your customers not only purchase complete satisfaction, but they obtain every foot of radiation they pay for.

We make the "**KING**" in two styles only—plain and ornamental (only one artistic style of ornamentation as illustrated) so that it is much easier for dealers not only to sell the "**KING**," but also to match them when further installation is desirable.

Remember the "**KING**" Radiator is right in the lead, and we are sparing neither time, skill, nor expense to keep it there.

We positively guarantee it free from leakage and defect.

Large stocks are always carried and your orders can be filled with promptitude.

We carry a full range of Steamfitters' Supplies. Get details of these lines; we are quoting very close prices.

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Plumber and Steamfitter

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ters, Sanitary Inspectors, Heating and
Ventilating Engineers, City Engineers,
Boards of Health, Architects, etc.

TORONTO, FEBRUARY 15, 1911

IMPORTANT QUESTIONS DISCUSSED.

At a meeting of the sub-executive committee of the N. A. M. P., several matters of deep importance were discussed. Foremost, perhaps, was the suggestion that a permanent secretary and organizer be appointed to look after the business of the Association and to create a wider interest. The idea was favored strongly at the meeting and will doubtless come up at this year's convention. There are good reasons for supposing that a permanent salaried official would prove a valuable man for the Association. He would be able to keep a close watch on current events and in many ways further the best interests of the Association; at the same time he could maintain an active correspondence, keep closely in touch with conditions in all parts of the country and further the work of organization. Whether or not the appointment can feasibly be arranged is a matter for the future to decide. In the meantime, it would be wise for members of the association to give the matter their fullest consideration so that it will be possible to discuss it on a good footing when the time arrives.

Another question discussed was the proposed change in name. There is "wisdom in a multitude of counsel" and, in order to reach an accurate estimate of the trend of opinion, the officers are anxious to receive suggestions from members. If you either object to or approve the proposed change, write to the secretary and voice your objection or approval. By this means only, will it be possible to arrive at an understanding in accord with the general sentiment.

A PUBLIC HEALTH EXHIBIT.

The proposal of Dr. McCullough, Chief Health Officer of Ontario, to hold a public health exhibit at the next Canadian Exhibition at Toronto, is a commendable one. People to-day are slowly awakening to the importance of all questions pertaining to health and the proposed plan would go a long way toward the stimulation of interest. It would help to arouse interest in the fight being waged against the white plague, in the causes and prevention of the more common infectious diseases, and, last but not least, in the use of modern sanitary appliances.

In connection with the latter point, it would be well for the proposed exhibit to include a display of the more recent appliances and sanitary arrangements. Such a display would be educative to a high degree and would, no doubt, help to impress on the public mind the necessity of a proper sanitary system in every home. If the

matter were taken up by plumbing organizations, arrangements could be made for a suitable exhibit.

BOOM THE GOOD FRIDAY MEETING.

The date for the Ontario Provincial convention is drawing near, and it behooves those, on whom the work of arousing interest devolves, to lose no time. It is in the best interests of the trade that the provincial organizations be revived and, as Ontario is the first to take the step, much will depend on the success achieved.

In order to assure a good attendance, it will be necessary to thoroughly advertise the meeting, and the object thereof. To do this effectively, each master plumber must be notified of the meeting and urged to attend. There is no time like the present for the active commencement of an advertising propaganda and from now on, the Good Friday convention should be kept ever to the forefront. Only by continuous work can a satisfactory large attendance be secured.

CHANGES IN PLUMBING CODE.

A number of changes have been made in the plumbing code of the District of Columbia, the most important being in connection with tapping and connecting to the public sewers by means of a new fitting, designed by the local sewer division and known as the "Thimble Y branch." It will no longer be necessary to box an outside soil stack in remodeling cases on existing soil stacks, but the requirement will still be effective in cases of the installation of new bathrooms. The restrictions on the installation of vitreous china water closet tanks is also removed. The subject of private and public garages of a specified size, and over, is given attention, and the requirement is made that all such structures shall be provided with a special oil and gasoline intercepting tank.

Inspector of Plumbing McGonegal has issued a circular in which he calls attention to the fact that two or more deaths have, in the recent past, been directly traceable to the location of the cock on "an independent gas hose connection" too close to the cock on the bracket. He states that independent connections have been prohibited for some time.

SALES AND SERVICE GO TOGETHER.

It is not an infrequent occurrence for plumbers to be called upon to connect up fittings, which have been bought from other sources. If it so happens that the

apparatus is deficient, or of such cheap variety that it lacks in some particular, the work of the plumber becomes extremely difficult and he may be sure that, if fullest satisfaction is not given afterward, he will be blamed for all shortcomings.

The plumber has one remedy. If he carries a full stock of all plumbing goods himself and displays it attractively, he will keep customers from going elsewhere. People are very apt to purchase a needed article when they first see it. Small heaters and other features of home equipment can be secured at department stores and when purchases are made in that way, the services of the plumber are afterward required to make the installation. But if the plumber shows in his own establishment all such goods, he has more than an even chance of making the sale in the first place.

EXPERIENCE AS A TEACHER.

No amount of experience can ever make a man perfect. Canvassers for trade papers frequently have dealers refuse their proposition on the ground that "they have been in business for twenty years and don't need advice as how to manage their store." This view is a very narrow one to take. The trade paper does not essay to show a man how to run his business. But, by telling what others are doing, giving the news of the trade and reflecting the opinions of men in all branches, it undoubtedly provides a ready means of improving business knowledge. No matter how extensive a man's experience may have been, he can still learn something from others in the same business and the trade paper serves as a medium for this interchange of ideas. The fact that a man values his own experience so highly, should naturally lead him to place some value on the experience of others.

REGISTRATION OF PLUMBERS.

The registration of plumbers in New Zealand is proposed by a bill introduced by the Minister of Public Health. It appoints the Inspector-General of Schools as Registrar, and provides that after July 1, 1911, all sanitary plumbing work shall be done by or under the immediate supervision of a person "registered under this Act." Every person who does or employs or permits any person to do any sanitary plumbing work in breach of the Act will be liable to a fine not exceeding £10. Registration is to be granted to every person who at the time of the passing of the Act was in actual business as a master plumber, or was a fully competent journeyman plumber. Application for registration on these conditions must be made before July 1, 1911. Any person is entitled to be registered who holds an ordinary or honors certificate from the city and guilds of London Institute (presumably in plumbing, although this is not stated), or some other certificate recognized by the Registrar as of at least equal value with that just named, or has passed the examination prescribed by regulations made under this Act. Boards of Examiners may be set up by Order-in-Council, with regulations as to the subjects of examination, the fee (not exceeding £1), and the form of certificate.

EDITORIAL BRIEFS.

Help build up the provincial associations.

The upward trend in tin having been checked, the price of solder will probably cease "aviating."

If the elevator to success isn't running, plod along up the stairway; it may be slower but you'll get there in time.

The bears on the tin market have been having their innings. Can it be that the bulls, like Kuropatkin are just "luring 'em on?"

Many plumbers have been heard from on the score of technical education and they all agree that it would be a splendid thing in many ways.

The Good Friday convention is not so far off now. Every Ontario master plumber should earnestly endeavor to be on hand on that occasion.

The appointment of a permanent secretary and organizer would result in an enlarged membership and an improved condition all around. It is well worth consideration.

Some Toronto plumbers have been inclined to regret the regulation making the smoke test compulsory, but, as one M. P. rises to remark, "it is better to smoke here than hereafter."

The use of too many words in advertising is double waste of time—your own and that of the man who reads. Get to the point at once when you have a point to emphasize; if you have several, make them keep close company.

An attractive store is a good advertisement; a dull and untidy store, a bad advertisement. Is there any business, plumbing or any other variety, so strong that it can exist without good advertising of some kind, or resist successfully the effects of bad advertising?

Spring contracts will soon be coming on. The master plumber, who looks to his own interests, will make sure that the prices he quotes are right. The price cutter has little chance of reaping success nowadays; so keep to the straight and narrow path of fair profit figuring.

Under the system of examination followed in Chicago, the master plumber has to be a thoroughly competent man before he can hang out his shingle. Good results are being obtained and the members of the trade themselves are quite in favor of the system, which keeps incompetents out and thus enables them to raise the standard of work done.

The Toronto Master Plumbers' Association have set a worthy example, in the appointment of a sick visiting committee. Any measure destined to cement the bonds of friendship between members of the trade, is worthy of highest commendation. By the work of this committee, much will doubtless be done to establish a kindly sentiment among master plumbers for others in the same line.

A Toronto master plumber makes the point that, since the smoke test has become compulsory in that city, master plumbers will be compelled to add from \$5 to \$10 on each contract to cover the cost of the test. The time involved in going back for the test, the carting of ladders to and fro and other incidentals add considerably to the cost of the work and must be provided for, if the plumber does not want to suffer losses.

Lighting Department Proves Good Feature of Business

The Fred Armstrong Co. Carry a Splendid Assortment of Lighting Fixtures, and Do Electrical Work as Well—Find That it Pays Them—Their Store is a Model in This Respect.

That the master plumber should handle lighting fixtures, is a point which has frequently been urged by Plumber and Steamfitter. It is a line which gives promise of ample returns; in addition, it presents an opportunity to brighten up the store and in that way serves as a good advertisement.

"I handle lighting fixtures as a side line," said a prominent plumber, the other day. "I find that the department is a good advertisement and it carries itself."

Even if the department did nothing better for the master plumber than that, it would still be well worth his while. It does not entail much added work, it brings new customers and, as stated before, it serves as an advertisement.

In most cases, however, it has been found that large profits can be made by carrying lighting goods. There is a good opportunity for custom, as the plumber

comes into contact with the people who will need fixtures, while engaged in his regular work. A new house will require lighting fixtures. The plumber looks after the heating, ventilating and sanitary appliances of that house. He makes the gas connections. If he were in a position to go ahead and install the fixtures, he could obtain the necessary order without any difficulty. A large number have recognized the opportunity thus presented and have gone into the handling of both gas and electric fixtures. The writer has yet to meet the man who did not feel satisfied with the results.

Carried a Large Stock.

Among the most successful in this connection are the Fred Armstrong Co., 277 Queen West, Toronto. As the accompanying illustration shows, the Armstrong Co. carries a very high grade

stock of lighting fixtures and have given up a good portion of their front store space to display of these goods. The store, as a result, is very attractive; there are, in fact, few plumbing establishments to equal it in that respect. In addition to fixtures, the stock includes a good assortment of art bronze lighting fixtures, which are used largely for window display.

Everything in the store is kept well burnished and clean. No dust is allowed to accumulate and thus detract from the selling quality of the goods. This is an important point to bear in mind; if lighting fixtures are to be kept, they must be well kept.

Can be Lighted Up.

The fixtures are all connected up and can thus be lighted at any time, a large switchboard being placed at one side of the store for that purpose. This makes



The Front of the Fred Armstrong Co. Store, on Queen Street West, Toronto, Showing the Handsome Stock of Lighting Goods Carried.

it possible to display the stock during the evenings and also is very handy in showing goods to customers.

The Armstrong Co. have carried lighting goods ever since they have been in business practically. Necessarily it has been a side line, as the firm makes a specialty of heating and ventilating work. "It has always been a good side line," explained Mr. Fred Armstrong. "There is a fairly good demand right along and the stock turns over quickly enough to prevent anything getting too shopworn or out of date to sell readily. The greatest point in favor of the department is, however, that it makes the store attractive and serves as a splendid advertisement."

An Electrical Department.

About six years ago the Armstrong Co. started an electrical department and have since handled contracts for wiring and lighting houses. They employ a foreman to look after that branch of the work alone and the number of men engaged under him varies from 4 to 10, according to the season and the demand.

The sale of fixtures is improved largely by this means. It would pay a plumber to carry one thoroughly competent man to do electrical work or to establish a connection with some electrical firm.

Old Established Business.

The Fred Armstrong Co. have been established in their present quarters since 1886. Prior to that time, they were located at the corner of Queen and Duncan Streets for two and a half years. The company have a large plumbing connection but the bulk of their work of late has been in heating and ventilating. They have handled a large number of school contracts of recent years. Their store on Queen Street is admirably laid out. The front show-room, which is shown in the illustration, is devoted largely to the lighting goods and the best grades of plumbing appliances. Consequently, it is possible to keep the front of the store always attractive and inviting. The offices, draughting rooms and additional show rooms are located in the rear.

CONTRACTS AWARDED.

The contract for the plumbing, heating and ventilating of the Victoria comfort station will go to W. Bownass for \$5,000.

W. J. McGuire & Co. have the contract for the plumbing of the house of J. M. Wilson, Ontario Ave., Montreal.

W. Scriven has the contract for the plumbing work at the Imperial Hotel, Guelph. Alterations are being made to the Bank of Montreal building and the plumbing and heating work is in the hands of Fred Smith.

The contracts for the plumbing, heating and lighting of the new Art Gallery at Montreal are the chief ones which have not as yet been let.

An Elaborate Summer Home at Cobourg; Extensive Plumbing and Heating System

One of the most handsome residences built of recent date in this country is the summer home, at Cobourg, of Willis F. McCook, lawyer of Pittsburg. As will be seen from the accompanying illustration, no expense was spared to make the exterior of the house striking and attractive.

From a mechanical standpoint, the house is very interesting, particularly as

lawn hydrants. At some distance from the house there is a large building in which are located the garage, stable, drive house, and greenhouse. There is a men's lavatory in this building and in the greenhouse is installed a hot water boiler and complete system of heating.

The house was started in December, 1909, and was ready for occupancy by July 1, 1910. A. R. Dundas, Cobourg, had the contract for the plumbing, heat-



regards the plumbing and heating systems. There are thirteen lavatories in all in the building and two of the largest hot air furnaces obtainable. The bathroom and kitchen fittings are most complete and elaborate. It is estimated that 2,500 feet of water piping was used around the grounds to connect up the

ing and metal work. The other contractors were: carpenter work, Henderson Bros., masonry, Jey & Co., painting, N. Dell, all of Cobourg. Mr. McCook was delighted, not only with the expedition shown by the contractors but by the satisfactory nature of the work done.

Public Health Exhibit is Planned; Sanitary Arrangements to be Included

Dr. J. W. S. McCullough, chief health officer of Ontario, is planning to hold a public health exhibit in connection with the Canadian National Exhibition held annually at Toronto.

"The idea is to give the public some idea of the steps being taken to fight disease and improve sanitary conditions," explained Dr. McCullough to Plumber and Steamfitter. "We have only a limited space, but it will be used for exhibits of serum, and other well-known preventives and cures; window tents for the treatment of consumptives will be shown, and if arrangements can be made, perhaps an exhibit of plumbing work will be included."

A Suggestion.

It has been suggested that the matter of a plumbing exhibit be taken up by

the members of the trade. Undoubtedly, the question of proper sanitation has an important bearing on the problem of public health and an interesting exhibit of modern plumbing, heating and ventilating apparatus can be devised. Any suggestion from members of the trade along this line will be gladly received and published by Plumber and Steamfitter.

Lectures to be Held.

Dr. McCullough is arranging also to have a series of fifteen-minute lectures delivered each day at 2 o'clock on health topics. The matter of subjects has not yet been settled, but it is quite possible that at least one address will be based on proper sanitation methods. The lectures will be illustrated by lantern demonstrations.

A Permanent Secretary and Organizer Suggested

Important Matter Discussed at Meeting of Sub-Committee of the National Association—Change in Name is Strongly Supported—Provincial Organization is Being Taken Up Actively.

Toronto, Feb. 14.—A meeting of the sub-executive of the National Association of Master Plumbers was held on Thursday, Feb. 9, at 113 Church St. Those present were: President, Geo. H. Cooper, Lewis LeGrow, secretary and R. J. Shannon, Ontario, vice-president. A number of matters of great importance and urgency were discussed.

One of the points taken up was with reference to the advisability of appointing a permanent secretary and organizer. It was felt that, to make the National a greater success, an official would be needed who could give his entire time to the secretarial work. He would thus be in a position to keep up an active correspondence with members in all parts of the country and would also be able to assist in organization—an important point.

It was decided to strongly recommend this change to the consideration of the members. Any suggestions with reference to this idea and the best methods of financing the same, will be gladly received.

A Charter Needed.

In discussing legislative topics, the necessity of procuring a charter was pointed out. The urgency of this matter being recognized, the legislative committee will be asked to go into it fully and to secure all necessary information by correspondence.

Another point on which information will be secured, is the possibility of effecting the elimination of the general contractor so far as plumbing work is concerned. This matter was touched upon by Vice-President Walsh in his annual report. The question will be taken up and information secured on the same.

Revision of Lists.

One question discussed has a direct interest for every master plumber in the country—the revision of selling lists. The general opinion inclined to the view that this matter should be left with each local association to work out, owing to the difference in existing conditions in each locality.

Change of Name.

Quite a little discussion was aroused over the suggestion of E. J. Young, of Calgary, that the name of the National Association be changed to "The Canadian Association of Sanitary and Heating Engineers." Opinion was unanimous on this score, all favoring the change most strongly. It was felt, how-

ever, that the matter was one of such wide import that the members as a body should be given a chance to express their views. Correspondence is, therefore, invited. All master plumbers, who have formed an opinion either for or against the change are requested to communicate their objections or approval to the secretary. Only by this means, will be possible to secure an accurate idea of the feeling of the trade on this matter.

Stirring Up Interest.

The officers of the N. A. M. P. are now actively engaged in the work of stirring up interest among master plumbers in all parts of the Dominion. Secretary LeGrow is conducting correspondence with the provincial vice-presidents and prominent plumbers in all sections, with a view to securing their active co-operation in the reviving of the provincial organizations.

A number of replies have been received, to the first letters sent out, which indicate that, in some sections at least, things are ripe for action.

H. W. Munday, vice-president for Quebec, writes that he has seen quite a number of master plumbers recently and "they all promised to do what they could to start an association." Mr. Munday adds that he believes things are ripe for action in the Province of Quebec and that he intends to take up the

question of reforming a provincial association at once.

Vice-President J. E. Walsh, Montreal, writes that he has been kept busy repairing his premises, which suffered in a fire recently, but that he would be in a position shortly to give time to association matters.

To Start Work.

G. E. Blake, St. John, vice-president for New Brunswick, writes that he expects "to get down to organization" shortly. The busy season will soon be starting and, in the meantime, he will endeavor to stir up interest in the association.

Association Notes.

J. E. Farrell, North Bay, chairman of the Essay committee, writes that he would like to receive the names of any one connected with the trade who would deliver an essay at the coming annual convention of the N. A. M. P. Anyone with a suggestion to make in this connection should communicate at once.

Charles Beekingham, Sault Ste. Marie, has written to Secretary LeGrow, stating that the five master plumbers of that place, are anxious to affiliate with the National Association. The matter has been referred to R. J. Shannon, Ontario vice-president.

The improvement in association stationery is being favorably commented on.



In Gimbel Bros. New Department Store, New York, a "Model Home" Display is Shown, the Accompanying Illustration Being of the Bathroom. The fittings are thoroughly modern and up-to-date in all particulars.



POINTS ON HEATING

By
CHAS. H. DENISON



CHAPTER 3.

Somebody has said that "the boiler was the heart of the heating system." So then if you have a good heart all will go well, otherwise you may get a defective circulation, almost none at all, or one that will simply rip the whole shooting match to pieces. Probably as many heating jobs have fallen down from a mistake in the boiler as from any other cause.

This does not, of necessity, cast any reflection upon the boiler itself, but rather upon the manner in which it was handled and applied to the job. The very best boiler in the world, improperly set, can not get results in keeping with the good name that it has. Therefore, it is up to the contractor, the architect and the owner to see that the boiler has at least a fair chance to deliver the goods. This means that it should have plenty of capacity, sufficient draft, proper care and be well covered. There are many different types of boilers, most all of which have more or less merit. It is not the purpose of this series to "boom" any particular make of boilers, so I will give several points that would apply to all, and from these remarks the fitter and the owner should be able to judge the matter without any more assistance.

Must be Easily Cleaned.

A good boiler will be one that is easily cleaned. As this must be done at least once every two weeks, the manufacturer will have had good sense enough to have arranged the make up of the boiler in such a way that the operation would be an easy one. A boiler calculated to carry the heat for several hours, without receiving further attention, must possess a fire box big enough to hold fuel sufficient to do the work. Both screw and push nipples as the method of connecting the sections have their advocates, and so we will not discuss the matter further than to say that whichever type you select, if the boiler comes from a firm whose reliability is unquestioned, you will be reasonably safe in either case. The ash pit should be ample and the grate so arranged that it can be easily replaced in case the occasion ever arises. I have seen grates so fixed that

it was a full day's work to get the old one out and a new one in. This is dead wrong, as it is a task that can be accomplished in less than half an hour's work, if the arrangement is fixed with any regard to common sense and simplicity. The height of the cellar will, to a certain extent, govern the construction of the boiler. It is bad practice to put a tall boiler in a shallow cellar and have to sink the boiler in a pit in order to make the job go through. If the fire box is large and the area of flue surface small you can gamble that there will be a lot of waste heat going up the chimney and that the owner will certainly raise Cain in regard to his coal bill.

Get Large Enough Boiler.

I have observed that, where there was but a small amount of water over the crown sheet, the water line was not very steady, and also that the boiler made too much noise. When you finally decide upon the boiler you want to get it big enough to do its work in an easy manner. Forty per cent. larger than what is "just big enough" is none too much for the purpose. You will have a much easier working system, less care of the job, and it will burn much less fuel, even though the boiler cost a bit more at the start. There are several points more that might be added, but enough have been given to allow you to form a general idea of the matter. As to the location of the boiler in the cellar, put it as near to the chimney as possible, and do away with any long run of smoke pipe. The steam (or hot water) will find its way to the radiators, never fear. It is somewhat different from the hot air furnace set as near the centre as can be done. If it is possible, it is a mighty good plan to have the boiler inclosed in a room all to itself. This keeps the other part of the cellar cooler, in case such a thing is desired, and also keeps the cellar much cleaner when it is necessary to clean the flues or to take up the ashes. It is better still if the coal bins can be put in the boiler room. The ash pit should be large enough to hold a three days' supply of ashes. It is all right to assume that the owner will take up the ashes every day; but an experience and observation of some twenty years have

convinced me that not one householder out of five ever does so; so make the pit big in self defence. It will pay in the long run. Now-a-days we do not see so many house boilers that are "brick set." Somehow I always rather fancied the idea, even when self convinced that I could hold the heat in the boiler by other means, fully as well or perhaps better. Just a matter of the way one has been trained, I suppose. The boiler should be well protected, at all events, and, if covered with asbestos, see to it that a good job is done, for not everybody knows how to turn the trick in a workmanlike manner. After the asbestos is on all solid and smooth, it is not a bad plan to paint it with some paint containing a heavy body of lead.

Paint Iron Work.

The iron work of the boiler should be painted with asphaltum at least once a year. Two or three times would not hurt it at all and would keep the job looking very much "slicker." In the matter of connecting up the "feed" to a steam boiler in a residence, I never connected directly with the city water. It may be all right, where you know the party who is to run the job; but as most any one is liable to take a whack at the thing, I generally ran the water into a small tank, as a point of safety. The owner will, of course, be advised against ever letting in cold water to the boiler when the boiler is hot, or if he can not find the water line. It is but the matter of a few moments to draw the fire and allow the boiler to cool down until you can tell where you are at. You will, of course, tell the owner that it is not wise to run the same water in the system for the entire heating season, and will instruct him (or her) as to the manner of keeping up the fire, telling them why it is better and more satisfactory to run a deep fire. If you don't know, look up some of the back numbers of this paper and find out, or try the matter out for yourself, and you will then be convinced and able to explain the reason in a clear manner. Attend to the firing tools. See to it that the owner has a full set, and make a place to put them. Nail up the printed directions for running the job, and leave things "in ship shape."

Bath Room Accessories are a Paying Line

Suitable Display and Advertising Help to Create Business in Plumbing Specialties—How One Firm Advertises.

The plumbing trade presents splendid possibilities for the successful featuring of side lines. There are a great variety of articles which are needed in every home, which the plumber should handle. Many plumbers do carry a stock of such goods and reap a good profit. In many

stances, can be sold to a good percentage of customers. The price is higher and sales would be frequent, but enough could be sold to pay the master plumber.

Advertise the Goods.

Best results can be obtained by advertising goods of this description. The

No extra space is required. The "overhead expenses" are not in any way added to. The goods can be turned over with regularity. There is no reason, then, why every plumbing establishment in the country should not carry a varied stock of these lines.

REPORT WILL BE READY.

Interest in the question of technical education is undoubtedly becoming very general and the report of the Royal Commission, which is expected about the last of the year, will be awaited by members of the plumbing trade. In response to a request for information, Chairman James W. Robertson of the Commission, writes to Plumber and Steamfitter, as follows:

"Our enquiry in Canada is not yet completed. We have not learned of any regular classes held specially for plumbers and tinsmiths, although men employed in those trades, and young men learning those trades, are reported as attending evening classes in several of the cities."

Plumber Gave Evidence.

The deliberations of the Commission have brought to light some facts regarding the possibilities of technical education for plumbers.

At the Victoria, B.C., sessions William Thacker testified. He had served an apprentice term in the Old Country for 6 years, and had in addition attended technical classes in plumbing work for two years, two classes being held each week. He spoke of the good he had obtained and thought that classes were needed in Canada. He advocated that both practical and theoretical work be taken up, including the wiping of joints and practice with models.

The accompanying illustration shows a class of plumbers at work in a training school in Australia.

McAvity's Messenger

Everyone desires a bath room that is modern and up-to-date, and without some of the useful and decorative fixtures shown here a lavatory or bath room could not be considered fully and properly equipped.

These are all strictly first-class goods made of solid brass carefully and heavily plated, and with ordinary care will last a lifetime. We make no attempt to compete with some of the cheap goods of this class on the market, but offer you, at a reasonable price, a first-class article, artistic in design, decorative and useful.



places, however, the plumbers do not handle them, and thus allow the trade and the profit to go to others.

The list of goods of this description, which should be carried, includes a wide variety of plumbing specialties and bathroom accessories. There are, for instance, a number of kinds of soap dishes, which should be kept in stock. The same with tumbler and tooth brush holders, towel bars, combination sponge and soap holders, bath seats, showers, bath sprays, massage spray brushes, tooth brush holders, robe hooks, toilet paper holders, stools, plate glass shelves and mirrors. All of these articles are more or less of a necessity in every well appointed bathroom and it is never a difficult matter to make sales. In no case is the price high; it is possible to sell any of the above mentioned goods for prices varying from 15 cents to \$2.25. There is, however, a fair margin of profit on all such sales and no expense is added through carrying them.

It is safe to assert that all households will in time acquire these bathroom accessories. It would not require any great exercise of salesmaking skill on the part of the plumber, then, to sell a full line of the same when he puts in the bathroom fittings. By pointing out the necessity for each article, he could readily convince the owner that it would be wise to make the bathroom complete in all details.

More Expensive Lines.

There are more expensive goods which should be carried as well Medicine cabinets and soiled towel baskets, for in-

accompanying illustration shows part of an ad. used by T. McAvity & Sons, Ltd., St. John, N.B. A full page was used and the space was devoted to illustrations of each article, together with a brief description and the price. In all 39 articles were shown.

This ad. proved to be an unusually effective one and much business resulted. In point of advertising merit, it ranks high. The opening talk is straight to the point and full of laconic, pointed forcefulness. The bulk of the space, which is devoted to illustrations and prices, could not very well have been used to better advantage.

Keep Them Displayed.

Not only should such goods be advertised but they should be suitably displayed. The walls of the shop can be utilized for this purpose.



A section of the Plumbers' Class at the Working Men's College, Melbourne.

Tests Were Made for Trap Siphonage

Elaborate Experiments Carried on to Ascertain the Effect of Distance on the Production of Siphonage of Traps.

Some elaborate experiments, says the Metal Worker, have lately been conducted by Lederle & Provost, sanitary experts, at 39 West Thirty-eighth Street, New York City, under the immediate charge of A. E. Hansen, to show that the distance of the traps of such fixtures as go into a bathroom from the soil and vent stacks has little or no effect toward producing siphonage of such traps or the breaking of the seal. At least distances of 15 to 24 in. and, it is understood, even greater than the latter were tried. It is not yet possible to give the actual results of the tests or the full authority for them, but as this issue immediately precedes the convention in Milwaukee of the American Society of Inspectors of Plumbing and Sanitary Engineers, it is thought that a few words with regard to the method of experimenting and the general equipment will be of more than usual interest.

The room set apart for the testing is located on the top floor of a lofty building. A special tank was erected on the roof for storing the water used in the experiments. In the upper right-hand corner of the accompanying reproduction of a photograph may be seen the pipe dropping from this roof tank. The outflow of water from the tank is under the control of a quick-opening valve, shown in the half-tone engraving and also in the accompanying elevation drawing. Immediately beyond the quick-opening valve is a short length of glass piping, giving the experimenter an opportunity to note the condition of the water flowing through the pipe. In each experiment the water was started in motion by opening the quick-opening valve, and as soon as it was apparent from the glass section that the pipe was filled to its full cross-section and contained no amount of trapped air, the water closet flush tank was put into operation and the flow of water allowed to go on, sometimes for one minute and sometimes for three minutes, and then the condition of the water in the various traps was noted.

Besides the water closet, the piping equipment comprehends the use of a bath tub, and of a lavatory or sink—in other words, an equipment such as is found in the ordinary bathroom. To the water closet was attached a glass tube, so that the height of the water in the water closet trap could be watched and measured before and after each experiment, to determine if the seal was disturbed in any way, and to what degree; and both of the traps, that for the bath and that for the lavatory, were provided

with a little glass window so that the height of the water could also be determined in these cases. As a matter of detail, a small incandescent electric lamp was suspended in each of the traps so that the water level could be noted at a glance easily and the difference in level before and after experiments noted.

The scheme of the experiment was to test with the minimum distance of trap to the drainage lines of 15 in. and then to run tests with this distance increased to 18 in., then to 21 in., and finally to 24 in. Besides increasing the distance between the trap and drainage line, arrangements were made for virtually increasing the height or length of both the main soil-pipe line and the vent line. It may be stated that as the length of section or nipple connecting



Equipment for testing trap siphonage.—
From Metal Worker.

the water closet bend to the soil-pipe line was changed, a similar extension was made in the case of the wash-basin, or sink trap, and the trap of the bath waste. The half-tone shows how the water closet outfit was supported on a portable base so that it could be readily made to accommodate the different distances.

For each series of tests, that is, for a series of tests with a given distance of traps from the vent line, soil and

vent pipes were left open the full size at the top. For the second experiment in each series, the bushing was screwed into the top of both the soil and vent pipe, this having a 3-in. hole in the vent stack and a 4-in. hole in the top of the soil stack. The object of this was to introduce friction in the flow of air or the adjustment of pressure at the top of these two lines, to get the effect of increased height of these pipe lines.

Similarly bushings with different size holes were employed for other tests of the series, these openings being $2\frac{1}{2}$ in., 2 in., $1\frac{1}{2}$ in., and 1 in. at the top of the vent stack, and 3 in., $2\frac{1}{2}$ in., 2 in., and $1\frac{1}{2}$ in. correspondingly in the top of the soil stack. Tests of this description were made with both siphon jet water closets and wash-down closets.

At the beginning of each test the top of the vent and soil stacks were closed with a blank, or cap, and the small air pump shown in the foreground was used to determine whether or not all of the connections were tight. This little air suction line was connected with a V water gauge, so that the degree of vacuum placed on the lines could be obtained by the distance the water level was drawn upward into the gauge and the difference in water level of the water columns could be watched a reasonable length of time to discover if the joints were sufficiently tight.

RIVER NOT CONTAMINATED.

City Engineer Hutecheon, of Guelph, seems interested in, but not at all alarmed, about the announcement of the Guelph Township Board of Health and township council that they will begin legal proceedings against the city without further delay, owing to the fact that the city is taking no action in the matter of bettering the workings of its sewage disposal works. "The placing of a stove in the septic tanks would not alter the temperature of the liquids there to any extent at all, and I have told Chairman Calvert so," declared the city engineer, who added: "The first fine day we can get we will weir the river and ascertain the extent of the volume of water that passes down there. I think, in fact, I am practically sure, when the volume of water is definitely known, the contentions of those who claim the disposal from the city's beds is contaminating the stream sufficiently to cause a nuisance will be shown to be nothing short of ridiculous. There is a lot of water in that river down there below the junction of the two branches of the stream and it would take a lot of very strong sewage disposal, more and stronger than flows from the city beds, to contaminate a stream of that size enough to cause a nuisance."

An Order Book Proves a Valuable Aid

The Master Plumber Needs Some System for Keeping Track of all Work Done—The Method Adopted by One Progressive Plumber With the Best of Results.

A good system of bookkeeping is just as necessary in the plumbing business as in any other branch of industry or trade.

In a great many cases, the master plumber himself looks after the books. He works hard through the day and spends the evening over his ledger and order book. It becomes doubly essential therefore that his system should be as simple as possible. At the same time, he cannot afford to keep his books in a careless or inefficient way. Many of the profit leakages in the plumbing business come from carelessness in entering up orders and keeping track of accounts.

An order book is one of the most necessary features of the bookkeeping system in a plumbing shop. If proper attention is not paid to this department, there are an infinite variety of ways in which losses can be incurred. For in-

The accompanying illustration is taken from "Plumbing and Lighting," and shows the method adopted by an Australian master plumber to keep track of orders. The sheet practically explains itself. You start off by bringing forward all work left over from the previous year. And then number the first job entered for 1911, No. 1. You can see at a glance when the job was ordered, when it was completed, and who it was done by. Also the price given, if any. Any remarks are made in the margin space provided for the purpose. After the completion of the job the letter "D" can be written as shown on the first five jobs. As they are finally entered up in the ledger, and done with, each job can be ticked with the letter "E" as shown on two jobs. When all jobs on that page are completed and entered, a line can be drawn diagonally across,

Council, Ald. Brown gave notice of a by-law to amend the plumbing by-law.

A. R. Dundas has been awarded the contract for the plumbing, heating and sheet metal work in the new C. N. R. station at Cobourg.

A Daring Deed.

This is a thrilling story of a narrow escape, in which Garrett F. Frankland, the genial secretary of the Toronto Master Plumbers' Association, is the central figure. "G. F." occupies apartments on Bathurst Street, the lower flat being used as a store. Fire broke out in the store the other night and soon the safety of the building was imperilled. It is alleged that "G. F." performed great feats of heroism in assisting the alarmed occupants of the apartments above to escape from the flames and our artist gives a realistic portrayal of the scene.

TO VISIT THE SICK.

At a meeting of the Toronto Master Plumbers' Association on Thursday, Feb.

ORDER BOOK, 1911.

No	To be charged to	Address of Job.	Instructions	Price.	Date Order Received	When Completed.	Workmen engaged on Job.	Remarks.
Brought forward from 1910	W. Stevens Address O. & T.	Same	New water service	£ s. d.	24 12 10	14.1.11	J. P., E.S., B.T.	See 1910 Order Bk. D.E.
	G. James Address O.		Overhaul roof		24 12 10	7.1.11	J.P., B.T.	D. ..
	E. J. Walters Address O.	Tennant's Address	Fit up water heater		27 12 10	9.1.11	E.S.	D. ..
	Mrs. G. Cook Address O	Tennant's Address	Repair water meter		27 12 10	28.12.10 27.1.11	Removed by G. J. Repaired by D. and Son Refixed by G.T. E.S., B.T.	Meter Notice sent D.E. 27/12/10
	R. Carter Address O & T.	Same	New water ser. main to meter	£ s. d.	2 1 11	8.1 10		Any new pipe inside D. meter, extra
1	G. Roberts Address O. & T.	Same	Repair gas escape		2 1 11	2.1 10	G.T.	Steps on job
3	J. Anderson Address Agent	142 W. Street C.	Repair roof*		3 1 11	5.1.11	E.S.	Take 25ft. ladder
4	E. Carter Address O. & T.	Same	Fix up new bath-room		4 1 11			Mr. Carter to select bath and charge to my acct. at Mr. srs. —
5	J. Ford. Address Contractor	182 G— St. F—	All roof plumbing &c., new additions	£ s. d.	4 1 11			See plans and specifications

stance, at the present season of the year, a great deal of jobbing work is done. If the business lacks proper system, there is certain to be a great deal of material used, and not charged up. Odd hours of the workmen are forgotten and not charged up either. Superior workmen are sent off to do inferior work; inferior workmen are put on superior work, and, possibly, the work has to be done over again without charge. In making up his bill, the master plumber has to trust to memory to a great extent, and he is likely to forget something.

Have an Order Book.

The remedy is to have a book, in which all orders, and particulars relating thereto, are entered promptly.

showing at a glance that the page is done with. The letter "O" stands for "owner," "T" for "tenant."

System Works Well.

This system works well and the plumber in question is convinced that he has stopped all leakages from that source. He now knows exactly what each job costs him for labor and he is, in addition, able to keep all work on hand in mind by reference to this book and to apportion his workmen, according to their ability and the nature of the work.

News Brieflets.

J. Rawlinson, Arthur Street, Toronto, has been seriously ill for the past fortnight.

At a meeting of the Medicine Hat

2, an advanced move was made to improve the fraternal relations between members of the trade in the Queen City. It was decided to establish a visiting committee, and the following were appointed: Bob Sherlock in the east, A. F. Passmore in the centre, H. Pepper in the north, A. J. McKim and W. R. Willis in the west. The duties of the committee will consist of visiting sick members and in other ways striving to improve the friendly relations between master plumbers.

A number of other matters were discussed, and considerable routine business was transacted. There was a good attendance.

Quite a number of new members were added to the roll.



The Question Box



Subscribers are Urged to Send Questions to be Answered, or to Comment on Letters Published. Descriptions of Jobs Done or Shop Kinks are Also Invited.

WHICH IS BETTER, CONTRACT OR DAY WORK?

Editor, Plumber and Steamfitter. — Should like to ask through the columns of your valuable paper some expressions as to the subject of contract work as compared with day work, or perhaps work on a percentage. Can you give me any pointers on the topic? Is it practised extensively in the business, and how does it turn out?

Toronto, Feb. 2

G. S.

We are not prepared to state just how extensively this practice obtains throughout the country, but we believe that it has been tried out in some places. The dishonest master or journeyman would, of course, have a first class chance to work in some time that was not called for; while, looking at it from another side, the workman would know when he started on a job, that he could take time enough to do the job in a correct way. Another point favorable would be that the customer would be sure that he was paying a certain per cent. of profit only, and he would be sure of exactly what that percentage was. We would be glad to hear from some of our readers who desire to express themselves upon the subject.—D.C.H.

CASE OF WHERE THE DRAFT GOES WRONG.

Editor, Plumber and Steamfitter. — Just connected up a boiler to a chimney from which we do not seem to be able to get the best of results. The fire acts sluggish, and is a long time in raising the steam, while the gas will burst out, at times, when the fire pot door is opened. Can you give me any suggestions in the matter?

Winnipeg, Feb. 4.

L. K.

First figure out the area, in square inches, of the chimney and the smoke pipe of the boiler. If the chimney area is the smaller, it will most likely have to be a case of a larger chimney. The smoke pipe may be sloped downwards from the boiler to the chimney, which would be incorrect. Perhaps the coal that is being used is not the correct size for the job. Possibly there may be some building, or buildings, near that are so located that they throw or rather deflect the outside currents of air in

such a manner as to choke off the draft of this chimney. The chimney itself may be in poor repair and need rethinking. Any or all of these points mentioned are liable to cause you difficulty in the proper working of the boiler.—D. C. H.

CONNECTING UP THE RADIATORS.

Editor, Plumber and Steamfitter. — In the different rooms in the second story of a residence is it a good plan to pass behind the radiator (on a hot water installation) when connecting up?

Montreal, Jan. 27.

M. L. T.

We do not believe that it is the best plan for several reasons, such as that it would make one set the radiator out too far into the room to have a good looking job, to say nothing of the inconvenience of having the radiator thus projected into the room. Neither is it necessary to run the pipes under the floor at a great expense of time and trouble when working in a house already constructed. A much better job can be made by making what is called the "top and bottom" connection, this allowing the mechanic to pair his supply and return pipes in the rooms below in a neat way, and not being obliged to split them running on each side of a window as is many times the case. It also brings the supply and return at one end of the radiator, the supply being thrown into the top of the radiator and the return taken from the bottom.—D. C. H.

SIMPLE TEST FOR A WATER METER.

Editor Plumber and Steamfitter.—Will you be kind enough to tell me some practical manner in which I can test a water meter.

Toronto, Jan. 19.

T. R. B.

You can weigh the water which passes through the meter. One gallon of water weighs about eight and one-third pounds while a cubic foot weighs not quite 62.50. We believe that 62.35 is the amount stated accurately. Two tests should be given, one when the water is drawn rapidly; the other when the water is drawn slowly. Note the weight of water the meter shows as having passed and observe what you really got in each

instance and you should be able to tell just where you are at.—D. C. H.

THE EXCESS CAPACITY OF THE BOILER.

Editor, Plumber and Steamfitter. — Will you kindly tell me just how much "leeway" I should allow for the boiler when I am figuring up a heating job

Brandon, Jan. 28.

L. L.

This brings up a matter regarding which there is a considerable amount of difference of opinion both among the practical and the technical men who are connected with the trade. Some who have been very successful in business allow 25 per cent. additional capacity for the boiler; while others never would feel safe unless they had a "leeway" of 50 per cent. We believe that the boiler, itself, the nature of the job, the manner of piping and the people who are to run the job, are some of the points that should also have a bearing upon the subject, while some of the other points that might be mentioned, we will leave to our readers.—D. C. H.

THE PERCENTAGE FOR EXPENSES.

Editor, Plumber and Steamfitter. — In your opinion would 16 per cent. be enough to allow for the item that we call the "overhead expense?" I should like to get your idea in regard to the matter.

Toronto, Feb. 6.

T. R.

We recently heard a man in this business claim that he had worked this item down to the low figure of 14 per cent., but we believe that this man was a decided exception to the rank and file who are in the business. We had a talk with another friend of ours, who runs his affairs in a very conservative manner, and we found that the second man's figure for the same item was some 22 per cent. So there you are. Others claim that 25 per cent. is none too much to allow for this purpose and, judging from the talk of some of the best men we know, we believe that it would run something over 20 per cent., rather than under 20 per cent. It is a case where each man should figure this item for himself, as no two businesses would be liable to show exactly the same percentage.—D. C. H.

Make Your Advertising Say Something

A Mere Business Announcement is Not as Effective as a Descriptive Ad.—Timely Ads. Evidence Progressiveness—Curious Mistake Make by Ottawa Firm.

It is a difficult matter to judge just what is a good or a bad advertisement. Sometimes the most insignificant-looking little ad., without point or directness, and minus any approach to catchy arrangement, will accomplish exactly the object desired. On the other hand, the most elaborately designed ad. will sometimes prove less effective. While it is never possible, therefore, to absolutely condemn an ad.—unless it contains statements calculated to damage rather than stimulate trade—common usage and knowledge of results has led to the laying down of certain rules, which it is always safe to follow.

For instance, if a man is paying for newspaper space, he may safely count upon getting better results if he uses the space for descriptive advertising, rather than for a mere announcement. A business card serves a good purpose, but, when surrounded by the usual variety of newspaper advertising, it will not stand out. The eye of the reader, attracted by the interesting statements on each side, will possibly skip a bald statement of business and location. It is regarded, therefore, as more telling to use space by "saying something."

W. B. & H. R. Sime have a splendid card. The arrangement is striking and the statements terse and convincing. "Our prices are right. Give us a trial"—this is the way to make good use of small space.

W. J. Nichols uses good space and his announcement stands out well. It is doubtful if the general criticism of business cards would apply in this case.

W. H. Walpole, Vancouver, has devoted his ad. to the announcement of his removal to new quarters—a contingency where advertising becomes absolutely necessary. This announcement would have been improved if the heading, which reads, "W. H. Walpole," in bold-faced type, had told something, i.e., "Walpole moving."

The Fred Armstrong Co., Toronto, have a splendid ad. here. The arrangement is catchy and attractive and the arguments numerous and to the point. It should be borne in mind, however, that the average master plumber is not in a position to advance the arguments used in this case.

H. G. Hagen & Co., Sydney, have embodied good ideas in their ad., but have neglected to display the matter sufficiently. A heading to read, "Your Plumbing Inexpensively Renewed," or "Renew Your Plumbing," would have

been an improvement. It would have been better also to confine the reading matter to the first thought, "We make your old heating and plumbing system to work like new, at a small cost." The announcements as to agencies for stoves and a water system would have been more effective if featured alone in subsequent ads.

P. Campbell & Co., St. John, N. B., have a fairly effective ad. The illustration and the single-word heading, "Plumbing," serve to classify the ad. at once. The reading matter, however, is somewhat vague and the last sentence, "Competent men sent for all classes of work," is the only point made.

Timely Advertising.

Two advertisements, inserted in the same issue of an Ottawa paper, are shown. These ads. are designed to take advantage of a situation which has arisen in that city, owing to the impurity of the city water. Timely ads. of this nature are an evidence of progressiveness and show that the writer is

fully alive to what is going on around him.

Blyth & Holloway have an unique ad. The arrangement gives a rather unusual showing of white space, and as such is likely to arrest the eye. The reading matter is to the point, but one criticism might be voiced. There is no "clincher." It would have been better if another sentence had been added, such as, "Ring us up," or, "See us at once."

McKinley & Northwood started out with a splendid idea. When the public mind is disturbed by rumors of impurities in the drinking water, an announcement of "Sparkling Clear Water" would appear to the eye as welcome as the sight of an oasis to the desert traveler. Unfortunately, the reading matter which follows becomes considerably involved and one conclusion to be drawn is that the only way to obtain the germs and impurities aforesaid is by using the sanitary water still, which the company is advertising. "Free from germs and all other impurities which are obtained only by the use of our No. 2 Sanitary water still. Which will free your drinking water from all impurities by distillation," reads the ad. The rest of the matter is to the point, but it is very doubtful if any reader would get beyond that one fatal phrase.

JOSEPH STEWART
Sanitary Engineer.
Steam and Hot Water Heating.
PLUMBING OF ALL DESCRIPTIONS.
GEORGE STREET, NEW GLASGOW
WORKMANSHIP GUARANTEED.

THE FEVER SCARE
will no doubt result in a thorough inspection of plumbing. Our work will stand the most stringent test.
Blyth & Holloway,
PHONE 3113.
BANK AND JAMES STS.

Sparkling Clear Water
FREE FROM Germs and all other impurities which are obtained only by the use of our No. 2 Sanitary water still, which will free your drinking water from all impurities by distillation. Needs no water connections and will fit any stove, taking the place of a tea kettle. No trouble and clean to use.
Come and see one in operation.
PRICE \$14.00.
McKinley & Northwood
Hiddeau St. Phone 1127.
Everything in Hardware, Plumbing and Tinsmithing.

Money Saved on Plumbing Supplies
Like everything else your plumbing wears out, or breaks, and has to be renewed. The next time you need anything remember—
—Our prices are wholesale.
—We ship anywhere.
—We guarantee everything.
—We sell for cash.
THE FRED ARMSTRONG CO. LIMITED
SUPPLY DEPT.
277 Queen St. W., Toronto

Evans & Chisholm
SHEET METAL WORKERS
PLUMBERS
DEALERS IN
STOVES, RANGES and FURNACES
Estimates Furnished for Heating by Hot Water Hot Air and Steam
JOBBER NEATLY AND PROMPTLY DONE.
Archibald St. New Glasgow N.S.
Telephone No. 14.
31-145.

† We make your Old Heating and Plumbing System to work like New at a small cost. Agents for McCarty's Famous Stoves and Ranges, and Lunt-Morse Pneumatic Water System which give you your own Fire Protection in your Country Home. Write or call for particulars.
H. G. HAGEN & CO.
Heating & Plumbing Contractors—Sydney C.B.—Telephone Connection

PLUMBING
If you are in the dark—as many often are—for Plumbing or Heating Repairs, this will enlighten you. Competent men sent for all classes of work.
P. CAMPBELL & CO., 23 Prince Wm. St.
1st Double Five Seven

PLUMBING AND HEATING
Our Prices are right. Give us a trial.
W. B. & H. R. SIME
121 Arthur St., west New Ontario Hotel
Shop Phone 432, Home Phone 156

WM. DUNBAR
PLUMBING
San and Hot Water Heating
1875 Adelaide St. West Port
Phone 186. (With Mahon Bros.)
W. H. WALPOLE
Fairview's Oldest Plumber
Has REMOVED from 142 EIGHTH AVE.
1499 BROADWAY.
COR. GRANVILLE.
Call and see him about your needs in the Plumbing line.

W. J. NICHOLS
Plumber, Hot Water and Steam Fitter - -
Hot Air Furnaces A Specialty!
TINSMITHING IN ALL ITS BRANCHES
Back of Royal Bank - VERNON

GOSSIP OF THE TRADE

News Brieflets.

The assets of Alf. Chartre, Montreal, have been sold.

Cadienx & Briard, plumbers, of Montreal, have dissolved partnership.

The assets of Samuel McCormick, plumber, Ottawa, are to be sold.

Gallagher & Walker of Regina are said to be thinking of removing to Weyburn.

J. Long & Co., plumbers and tinsmiths, of Welland, Ont., have assigned to the sheriff.

Johnson & McKenzie, plumbers, Picton, Ont., are reported to have assigned.

Higgins & Orpwood are taken over the plumbing business of Higgins & Mohr at Moose Jaw, Sask.

Hoar & Milne, plumbing and heating firm, Calgary, dissolved partnership the first of the year.

J. R. Myers, Stratford, has undergone an operation for appendicitis and is reported to be doing well.

E. S. Coppins, Woodstock, has secured a smoke testing machine and will use it on all his work in future.

The annual meeting of the Plumbing and Engineering Supply Co. will be held in the head office, Fort William, on Feb. 15.

McGurk & Sutton, formerly the Clark Street Metal Works, Vancouver, have purchased the tinsmith business and plant of Paine and McMillan and have opened up a store in the Stevenson Block on Lonsdale Ave., North Vancouver.

A Big Expenditure.

Edmonton proposes to spend \$50,000 on the installation of a generator and on other plumbing work at the civic buildings this year.

Suffered From Fire.

Vice-President J. E. Walsh, of the N.A.M.P. had a fire in his shop at Montreal recently, considerable damage being done. He is now getting things ship-shape again but has experienced considerable trouble.

Moved Into New Premises.

Townley & Harper, Vancouver, have moved into their fine new premises at 151 7th Avenue. They have just completed work on twenty-five suites of apartments for Colville & Co., at 11th and

SEND IN THE NEWS.

News pertaining to the trade will be gladly used in the columns of Plumber and Steamfitter. If you know of something that would interest brother plumbers in other parts of the country, send it along. Personal items and association notes are not difficult to obtain; drop us a line when you hear something worth while. Photographs of stores, plumbers' meetings or illustrations of trade problems would also help to give our news columns an added interest.

Quebec Streets, and have a large number of residential contracts on hand.

Plumber Sustains Loss.

The new business block of J. E. Farrell, North Bay, was damaged by fire on February 7. The blaze originated in some oakum stored in the basement, which is used by Mr. Farrell as a plumbing shop. The damage is estimated at \$1,000 on the building and the same on the stock, covered by insurance.

Hospital Contract Awarded.

The contract for the plumbing in the new hospital for the insane, now being erected by the provincial government at Coquitlam, B.C., has been awarded to W. G. Brown, 239 Hastings Street, Vancouver. The contract calls for the installation of some 280 of the very highest grade of hospital fixtures.

Plumbing on Farm.

Norman Catley, Tregarva, has let the contracts for the erection of a two-storey brick residence on his farm and Gibson & Wallace, of Lumsden, Sask., will supply the heating plant and do the plumbing and tinning work. The cost of the building will be about \$7,000. Under the system of taxation in the municipality, Mr. Catley's tax bill will not be any greater than formerly.

Are Dissatisfied.

It is given out in Ottawa that the plumbers and steamfitters engaged on the work of the Chateau Laurier are dis-

satisfied because they were not working under conditions similar to those enjoyed by men engaged with Ottawa contractors. The matter was discussed at a special meeting of Local 71 but no definite action was taken.

He Sent a Sample.

Lewis LeGrow, Toronto, received a request the other day, from a lady for a pint of cleaner. Scenting the possibility of making a customer, he suggested that he send up a sample first. The sample, it seems, was satisfactory; at any rate, nothing further has been heard from the lady. "Salesmanship methods went wrong that time," comments Lewis, "but at any rate, she knows I am honest in my dealings."

Planning a Ball.

The entertainment committee of the Master Plumbers' Association of Toronto, is planning a ball which promises to eclipse all previous events of the kind held in Toronto. It will be held on the evening of Friday, Feb. 24, at McConkey's restaurant. The programme of the evening will include dancing, cards (for those who don't dance), a short programme and a dinner. The tickets will cost \$2.50 per couple and \$1 will be charged for extra lady. Chairman Pass-



more states that, at the rate the tickets are being sold to date, there will be at least 300 people present on the big occasion. Quite a number of manufacturers will be in attendance, it is expected. No pains will be spared to make the

1911 ball the most enjoyable event in which the plumbing fraternity has ever participated.

Double Identity Needed.

One of the hardest worked men in Toronto to-day is Plumbing Inspector Copping, who is supposed to make all the smoke tests. It is practically certain that at least one more smoke inspector will be required if the test is to be made in all cases, as provided by



the new civic legislation. It is figured that at least 5,000 tests will be made during the year and to cover them all alone, Inspector Copping would require to possess the astral quality of appearing in more than one place at the same time.

Plumber Built Tower.

Writing on the English development of shot manufacture, the American Consul at Bristol says the erection of the Bristol tower for shot-making—the oldest shot tower in the world—is credited to William Watts, plumber. It was built in 1769 by sawing holes in the centre of the floors of his house, and locating the well in the cellar. The tower is still in use, although it has been heightened by the addition of some storeys. Watts secured a patent on December 2nd, 1782, and sold his London rights in 1800 for £10,000.

A Miniature Niagara.

A house on Agnes Street, Toronto, was vacated recently and the outgoing tenants neglected to have the water cut off. Natural result; pipes burst during the last cold snap. At least, it is thought the trouble started there, because when new tenants started to move in on Monday, the house was found to be inundated and it looked as though the flood had been going on for some time. A. F. Passmore was called in and he found it necessary to borrow an oil skin hat and a "sou'-wester" before he ventured in.

The job required nautical as well as plumbing skill to handle.

A New Firm.

James Tedford, Weyburn, Sask., has disposed of his hardware business to A. R. Fraser and W. A. Enticknap. Mr. Fraser has been in the plumbing and tin-smithing business, having previously been a member of the firm of Zabel and Fraser. The new firm will add to the stock carried by Mr. Tedford and will continue in the harness, plumbing and tin-smithing lines.

A Big Contract.

Geo. L. Kelling, well known in California, has his place of business at 765 Cambie Street, Vancouver, and makes a specialty of Durham work, in which he is an expert. He has just secured the plumbing work on the new "World" building, which, with the tower, will be seventeen stories high and will contain 152 fixtures. He has on hand a ten-story block for Wm. Holden, in which there will be 150 fixtures, also a ten-storey building for the Metropolitan Club on Hastings Street which will have 310 fixtures.—Plumbers' Trade Journal.

Activity in North Bay.

The master plumbers of North Bay are showing activity in effecting a betterment of conditions there. A building by-law is under consideration and an effort is being made to have a plumbing by-law put through at the same time. One provision will be the fixing of a



J. E. FARRELL, North Bay.

license fee of \$10 or possibly \$20. It is intended to model the by-law on progressive lines.

It is also an evidence of a progressive spirit on the part of the trade that mem-

bers are now filling public positions there. J. E. Farrell is a member of the town council, and is doing good work as a "civic father." Mr. Cherry is on the board of health, and is also reputed a valued member.

For Comfort Station.

The plans for the comfort station at Victoria, B.C., have been drawn up and the following tenders received: for the plumbing, heating and ventilating, D. R. Menzies & Co., \$6,725; W. Bownass, \$5,000; Victoria Plumbing Company, \$6,904; Colbert Plumbing Company, \$6,897; R. J. Knott, \$6,832; J. H. Warner & Son, \$7,000; Hayward & Dodds, \$6,601; A. Sherret, \$6,865. Tenders for the erection of the buildings were received from the following: Dinsdale & Malcolm, \$13,787; Parfitt Bros., \$16,493; Luncy Bros., \$14,936; Thomas & Hodson, \$13,280; Ferris & Barff, \$12,718; city engineer, \$12,893.

Want a Franchise.

The question of the city seeking an amendment of the Beck Act, respecting franchises providing for the granting of a direct franchise for steam-heating, took up considerable time of the Toronto Board of Control. The question was introduced by H. D. Gamble, appearing on behalf of the Dominion District Steam Heating Co., who are anxious to supply heat to Rosedale residents. Mr. Gamble asked that, if a vote were taken, only the Rosedale district, the part of the city directly affected, should vote on it. The controllers sent him to the Legislature with his request. "We should do nothing in the matter of granting a steam heating franchise to any company until we have ascertained whether it cannot be made a public ownership utility," said Controller Spence.

Joins Wrinkley Co.

L. K. Markey, for the past eight years general sales agent for Ideal Mfg. Co., Detroit, Mich., and Windsor, Ont., has severed his connection with this concern and taken a position with The Wrinkley Co., Detroit, Mich., manufacturers of grease cups, oiling devices, closet serews, radiator air valves and automobile specialties. This company has established a branch factory at Windsor, Canada, to take care of the increasing trade in the Dominion, and Mr. Markey as one of the owners of the Canadian Wrinkley Co., Limited, will see the trade in Canada, as well as the U.S. The Wrinkley Co. are preparing for the market new specialties that will be of interest to the trade. Mr. Markey is well known in the plumbing trade from Halifax to Vancouver and his many friends will wish him all the success possible in his new field.

Death Occurs of "Father of Trade"

With deepest regret will plumbers in all parts of the country hear of the death of Robert Ross, of Toronto, which occurred on Monday morning at 2.30. The deceased was one of the oldest and best informed plumbers in Canada and, so widely known and respected was he, that he was often alluded to as the "father of the trade."

Although he had been suffering for some six years, the end came suddenly.



The Late Robert Ross

He had attended a funeral on Saturday morning, but was seized with an attack of heart trouble on the following day and gradually sank, passing away at his home, 19 Sorauren Ave.

The late Robert Ross was born on October 21, 1848, the anniversary of the battle of Trafalgar, in Edinburgh, Scotland. He started at the age of 13 years to learn his trade, and was put through a long apprenticeship, gaining in that way, a most thorough knowledge of the trade. When thirty years of age, he came to Canada and settled in Toronto, where he started in business at the corner of Queen street and Dunn avenue. For twenty-seven years, he carried on business at the same stand, gradually establishing a wide connection, and earning respect and admiration from all with whom he came in contact. Six years ago, he became subject to heart trouble and was compelled to relinquish the active control of the business, which was taken over by his nephew, Andrew Ross.

The latter had been with him since a mere boy, having started to learn his trade at the age of 12 years, when he came out to this country on the death of his father. During the past summer, however, Mr. Ross seemed to recover

some measure of his health, and was able to superintend a good deal of the work done at the Prince George Hotel.

An Association Worker.

He was a great believer in trade organization, and had been a mighty power all through his business career in helping along the plumbing associations. In 1904 he was president of the National Association, and that body was stirred to great activity under his progressive sway. During the years 1904 and 1905 he was president of the Toronto association, and it was by his active work at that time, and the assistance that he was ever ready to lend to fellow plumbers that he gained the sobriquet "father of the trade."

It will be recalled that at the last convention of the National association, he was called upon to open the proceedings, and his appearance at that time was greeted with every manifestation of open affection and respect.

Prominent in Other Circles.

He was a prominent worker in Masonic circles, being a member of Alpha Lodge. He was a past master of Alpha Lodge, past first principal of Antiquity Chapter, a Scottish Riter, a member of Geoffrey de St. Aldemar Preceptory, and a Shriner. In addition he was a member of the A.O.U.W. and the Sons of Scotland.

A staunch Presbyterian, he had been long a member of Dunn Avenue Presbyterian Church, and had served as an elder and treasurer.

He is survived by a loving wife. The funeral takes place on Wednesday afternoon to Prospect Cemetery.

OPEN SHOP DECLARED.

Edmonton, Alta., February 11.—Open shop for all building trades is the declaration of the General Contractor's Association of the Edmonton Builders' exchange, according to a decision reached at a final meeting held to-day. This does not include the Bricklayers' and Masons' union and Laborers' union, which have the necessary non-sympathetic clause in their agreement.

The open shop rule will come into effect May first.

A uniform scale of wages for all trades, which grants light increase all round, has been drawn up, and will be forwarded to several unions.

MODERN SCHOOL EQUIPMENT.

The new high school at Peterboro promises to be one of the best equipped in the province from the standpoint of plumbing, heating and ventilating. The contracts are in the hands of E. A. J. Duranceau, 227 Hunter street, and the accompanying illustration shows the stock which will be required for the work. The photograph was taken in the store of Mr. Duranceau and everything shown, with the exception of the bath tubs, will be installed in the school.

A splendid feature of the equipment will be the installation of the eight open basins which are shown in the picture. These will be placed along the walls in the laboratory for the use of the students in chemistry and physics classes. The nickel-plated instantaneous heater will also be installed in the laboratory.

Mr. Duranceau will commence the work as soon as the season permits.



Stock in Store of E. A. J. Duranceau, Peterboro, to be Used in New High School Building.

New Buildings, Water and Sewerage Systems

Opportunities Offered by Municipalities and Private Enterprise for New Plumbing, Heating, Ventilating or Sanitary Systems—Work Being Undertaken in Every Section of the Dominion.

Municipal Undertakings.

Montreal is planning the establishment of a sewerage farm.

Camrose, Alta., will install a waterworks system this summer, to cost \$100,000.

Plans have been prepared at Esquimalt, B.C., for a sewer system, to cost \$250,000.

Point Grey, B.C., ratepayers have authorized the expenditure of \$350,000 on road improvements.

Calgary ratepayers will vote on the establishment of a municipal paving plant, at a cost of \$25,000.

It is thought that Vancouver will have to spend \$100,000 to provide a complete water system for the newly annexed districts of Hastings Townsite and D.L. 301. This will make Vancouver's bill for waterworks about \$500,000 this year.

A by-law may be submitted to the people of Ottawa to authorize the expenditure of \$195,000 for waterworks purposes. For the completion of the work on the aqueduct \$150,000 is needed and over \$40,000 is required for water main extension on the Glebe.

Public Buildings.

Kingsmill, Ont., will erect a library.

An eight-room school is to be built in Souris, Man.

A three-storey school is to be built in Victoria, B.C.

Calgary will build new incinerators, at a cost of \$15,000.

Wesley Methodist Church, Brantford, is planning an enlargement.

The sum of \$30,000 has been voted for a new school at Collingwood.

A woman's club is to be built in Vancouver, to cost about \$50,000.

It is intended to spend \$120,000 on the new hospital in Kamloops, B.C.

The Oddfellows' Block, Bracebridge, was destroyed by fire on January 17.

About \$37,500 will be spent on the new St. Paul's Presbyterian church, Calgary.

A women's building is to be erected this year at the Toronto Exhibition grounds.

The Marysville, N.B., Methodist church was destroyed by fire, at an estimated loss of \$65,000.

A new stock pavilion is to be erected in connection with the annual exhibition at Edmonton.

Work on the first building of the Methodist College at Regina will be started in the spring.

Sydney, N.S., city council has approved of the granting of \$75,000 for the erection of two brick schools.

The Homoeopathic Hospital, Montreal, have a committee at work to raise \$100,000 for a new building.

The Art, Historical and Scientific Association, Vancouver, have announced their intention of building a museum.

The Woman's Hospital Aid Society, Winnipeg, contemplate the erection of a convalescent home, to cost about \$30,000.

Markdale, Ont., has received the offer of \$5,000 from the Carnegie library fund, provided the town provides a suitable site.

The congregation of Murray Street Baptist church, Peterboro, have decided to build a new edifice, at an estimated cost of \$56,500.

The Berlin board of health have decided to have plans drawn for three buildings, instead of one, to be used as an isolation hospital.

A training school for young priests is to be built at St. Boniface, Man., and plans are being prepared by a firm of Montreal architects. The estimated cost is \$250,000.

A three-storey primary school is to be erected in Edmonton. The school will be built of brick and stone dressings, with fireproof floors over the boiler-room, and fireproof staircase wings, the estimated cost being \$100,000. Contracts were not awarded at time of writing.

General Buildings.

The Times, Moose Jaw, was burned out, causing a loss of \$100,000.

Plans for the new Bank of Montreal building in Brantford have been prepared.

A new canning factory, to cost \$50,000, is to be built at Picton, Ont.

A brick and stone 90-room hotel is to be built on Jasper Avenue, Edmonton.

Elevator No. 1 of the Maple Leaf Milling Co., at Brandon, was destroyed by fire, causing a loss of \$75,000.

The Bank of Montreal is contemplating the erection of a large building on their present site in Brantford, Ont.

A 40-ton pulp and paper mill is to be erected at Three Rivers, Que., by the Union Bag & Paper Co., of Sandy Hill, N. Y.

Donald Fraser will erect a commercial building at the corner of Albert

and Slater Streets, Ottawa, with seven stores and twelve apartments.

The Canadian Can Corporation, Montreal, are contemplating the erection of a foundry and the completion of their unfinished power building at Rockfield.

Ernest Smith, of Ottawa, representing an American firm, has under consideration the location and erection of a factory to cost about \$100,000, at Hull, Quebec.

The building permits issued recently in Ottawa include: Edward Wentzlaff, dwelling, \$2,500; William Beatty, dwelling, \$2,500; Jacob Potowin, dwelling, \$3,000.

Mr. Wilder has purchased another large block of land on Bleury street, Montreal, and intends erecting a ten-storey building there as soon as plans can be completed.

William Price, general manager of the Western Steel Corporation, is authority for the statement that the steel plant to be constructed near Sunbury will be started by April 1.

The McClary Manufacturing Company, London, have taken option on about 24 acres of land between Trafalgar street and the Thames river as the site for further extensions. Other additions are under consideration.

The L. McBrine Co., trunk manufacturers, Berlin, and the Art Glass Co., are planning to construct large additions to their present factories; the Felt Boot & Rubber Manufacturers intend building a box factory.

At a special meeting, the Calgary city council reached an agreement with the C. P. R. whereby the latter will at once proceed with the erection of a hotel in that city, which, when completed, will cost in the neighborhood of \$1,000,000.

Plans are now being prepared by the architects, Messrs. Warren and Wetmore, for a first-class modern residential hotel for the Carlton Hotel Company, of Montreal. Contracts will be let about the end of March for the construction of the hotel, which, it is expected, will be ready by the beginning of May, 1912.

Plans have been filed by Parr & Fee for a twelve-storey building, to be erected on Granville Street, Vancouver, for Mr. Dominic Burns, \$400,000. The building will be constructed of steel and faced with brick and terra cotta. Excavation work on the 12-foot basement has been practically completed. A great amount of architectural work will adorn the porticos and stuccowork. There will be three passenger elevators and one freight hoist. The structure will be fireproof in construction and will have a ground area of 50 feet by 120 feet.

PLUMBING AND HEATING MARKETS

SUMMARY OF MARKET.

As a result of the steady increase in the price of tin, solder has advanced in price during the past two weeks. It is expected now, however, that the break in the price of tin on the London market, will be followed by corresponding decreases in solder.

Easier quotations in enamelware are predicted, following the reductions made in the United States.

MONTREAL.

Montreal, Feb. 13.—Thanks to considerable construction work going on this winter in the city and surrounding towns and cities, business has been maintained at a fairly satisfactory level. The general opinion is that the city is going to see a great deal of construction work this year and the first month has been by no means a disappointment? The demand for general plumbing lines and also steamfitters' necessities is fairly good and the larger jobbers have expressed themselves as rather pleased with the situation and especially with prospects.

In the metal markets tin has again furnished the feature by a sharp decline. In the last issue it was stated that tin was quoted at 47 cents a pound and would probably go to 50c. This week there have been several declines, and the price is now down to 46 cents. Copper is also weaker, but lead and spelter are stronger.

Soil Pipe.—Trade is practically unchanged. There is a fair enquiry and for the season the amount of business is rather satisfactory. Discounts for medium and heavy are 70 and 10 per cent.

Lead Pipe.—Again there is no change to report in this market. There is a fairly good bit of business passing, but the trade is not being overworked just now. Prices are: pipe and waste, 9c per lb.; calking lead, 4½c; traps and bends, 50c.

Solder.—The market remains the same thus far, although tin has been changing. The decline will no doubt relieve the feeling that solder was likely to go up in sympathy with tin. There is a fair demand at present.

Iron Pipe.—The demand for iron pipe has been rather good. Orders have been rather numerous for this season. There has been no prominent change. Quotations are: ¼-in. black, 63; galvanized, 48; ¾-in. black, 59; galvanized, 44; 1-in. black, 69; galvanized, 59.

Radiators and Boilers.—There is some

activity in these lines indicating considerable work in progress. Quotations are 60 and 5; round hot water boilers 50 and 10; hot water radiators, 50 and 7½; steam radiators, 50 and 7½ and 2½ per cent.

Metals.—As stated above tin is much weaker although there is still the possibility of its regaining the position it has relinquished. However, the future in this market is a problem. Copper too is weak, while lead and spelter are both firmer and occupy a firmly strong position.

TORONTO.

Toronto, Feb. 14.—The market continues dull but there is every indication of an early resumption of activity. Orders at present are small but a steady flood of enquiries shows that spring business will soon open. The supply houses are not busy, but are utilizing the time in preparation for the rush of trade which the opening of spring will bring.

The feature of the market for the past month has been the steady upward tendency in solder. The sharp advances have been due, of course, to the soaring tendency of tin. Now that tin is showing a weakening tendency, solder is reported to be on the verge of a decline. At time of writing, however, the price holds firm on half-and-half, although an easier tendency is noted in wiping.

Enamelware.—The demand is small and chief interest in this line centres in the price. An all-around decline has been made on the other side and it is not at all improbable that decreases will come here in the not far distant future.

Boilers and Radiators.—There is still considerable work being done in the heating line and orders are being placed for boilers and radiators. There is more activity apparent than in plumbing work, owing to the more or less open weather, which has prevailed.

Soil Pipe.—As no outside work to speak of is being done, the demand for soil pipe is very light. It is reported that difficulty is still being felt in securing light soil pipe but there is practically no call for it. Medium and heavy is quoted at 70 and 10; 7 and 8-inch sizes, 50 per cent.; fittings, 70 and 10 off.

Lead Pipe.—The demand is small and prices are remaining stationary. Lead waste sells at 9c per lb. and calking lead at 4½c per lb. Traps and bends are quoted at 50 per cent.

Solder.—The price of solder has gone up considerably in the last two weeks, owing to the steady upward progression

of tin. To-day, half-and-half sells at 25c to 26c and wiping is sold anywhere from 19c to 23c. With respect to wiping, a distinctly easier tendency is noted and quotations for the most part range around 19c. It is stated that a decrease in half-and-half can be expected at any time now, unless tin starts to climb upward again—a not impossible contingency by any means.

Iron Pipe and Fittings.—The discounts on cast iron fittings are given from 65 to 70. Malleable fittings stand at 37½ to 40 per cent. Other quotations are: cast iron bushings, 70; malleable, 67½; nipples, 75 and 10; headers, 60; flanged and malleable-lipped unions, 65 per cent.; galvanized pipe, \$6.18; black pipe, 1-inch size, \$4.54.

Metals.—Tin has fallen off 2 cents, being now quoted at 43c and 44c. This price is still a high one and speculation is rife as to what course events will take in the near future. Some expect further breaks, but others are confident that the London bull syndicate will reassert control and force the price back up again.

WERE KEPT BUSY.

During the year 1910 the Chicago board of examiners were kept busy. From January 1 to November 22, some 1,024 journeymen in all underwent the ordeal and of these 731 emerged who had been weighed and not "found wanting." During the same period 221 master plumbers went before the examiners and 114 passed. Each examination was carried through thoroughly and no one was allowed to go through without a full test.

The Trade Represented.

The present Board, of which the Commissioner of Health, Dr. W. A. Evans is ex-officio chairman, is composed of Master Plumber C. J. Herbert and Journeyman W. W. Petrie, both of whom were appointed members of the Board by Mayor Busse in May, 1909, and both of whom received the unanimous endorsement of their respective associations. William H. Luthardt, the secretary of the Board, was appointed about a year ago.

A proposition is being entertained by local capitalists and others to build a large tourist hotel at Penticton, B.C., to cost about \$100,000.

Galbraith & Sons will erect a large sawmill and factory on Lulu Island, New Westminster, and have applied to the city for a twenty-five years' lease.

W. Poper Hull, a Calgary capitalist, has purchased 125 feet frontage on Toronto street, Medicine Hat, on which he will erect a four-storey block in the spring.



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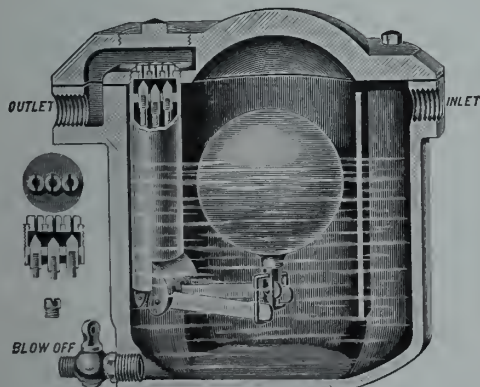
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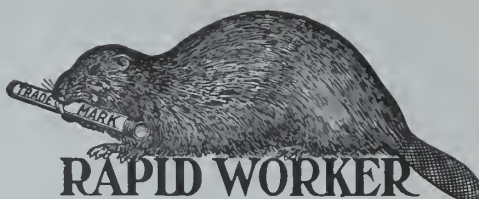
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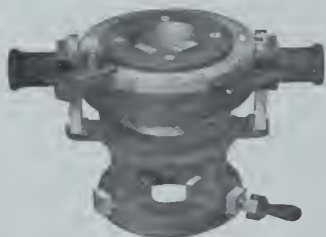


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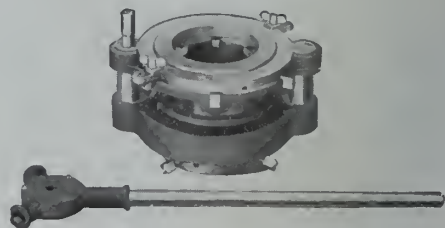
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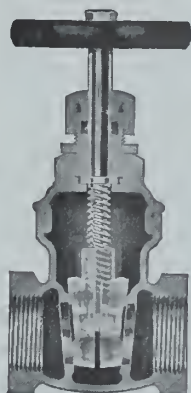


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"Kerr" Radiator Valves

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your valve troubles are over

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Kerr

Engine

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Walkerville - Ontario



*We charge the
price and furnish
the reliable goods*



Look for
Our Name
"KERR"
on All
Genuine
KERR
VALVES



Dart Unions

A bronze to bronze ball joint
that can be made instantly, whether
pipes are in or out of line. Simply draw
the two ends together and a tight and last-
ing connection is made. It cannot leak or
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pleased customers.



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PLUMBER & STEAMFITTER

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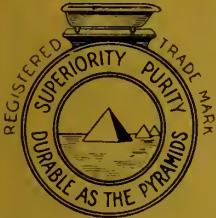
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No. 5

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PORT HOPE, CANADA

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under the British Flag



PORCELAIN ENAMELED
SANITARY WARE



S T A N D A R D

"That which is set up as a unit of reference."
"A form, type, example, model, used as a basis of comparison."

Ideal

A standard of desire. An ultimate object or aim.
A mental conception of what is most durable.

SUCH ARE OUR WARES!

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MONTREAL, 155 Notre Dame St. West

Beaver Brand

Cast Iron Enamel Ware

Famed for its Smoothness, Colour and Wear



This Cut Illustrates Our

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This is one of our leading and best known lines, which has given satisfaction throughout the Dominion. Our new and up-to-date plant is unrivalled for the production of Bath Tubs, Slop Sinks, Kitchen Sinks, Laundry Tubs, Lavatories, Closets, etc. Customers can rely on having their orders promptly filled. Every article of "BEAVER BRAND" manufacture is guaranteed.

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MARITIME PROVINCES
All Jobbing Houses

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All Jobbing Houses

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E. B. Plewes, 120 Lombard St.

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WAS ADOPTED IN THE YEAR 1910 IN

FORTY PER CENT.

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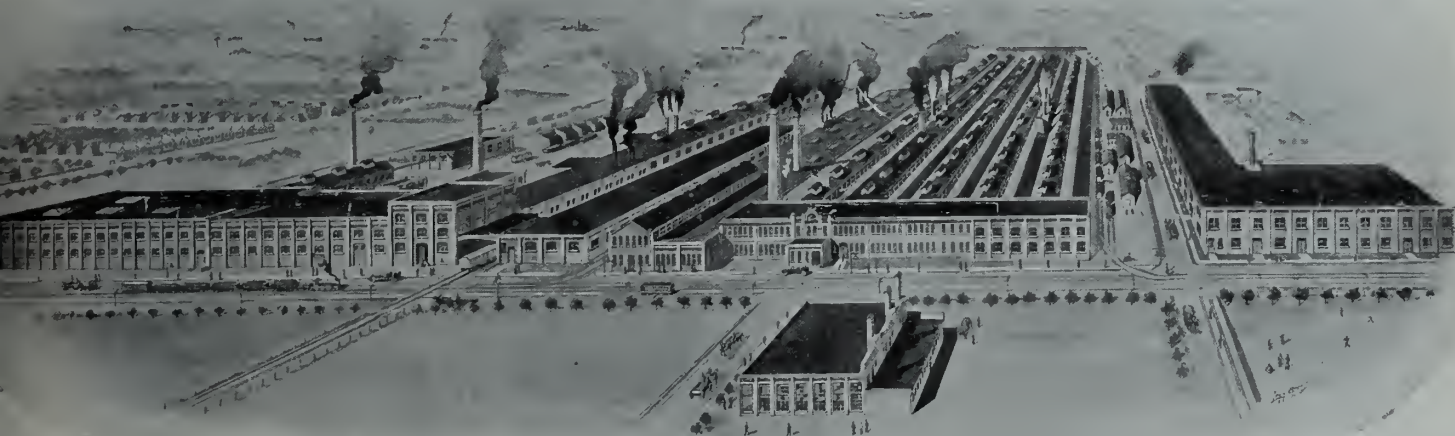
Hot Water Installations Throughout Canada

Upon no other point are Architects, Steamfitters and Proprietors so well agreed as on the merits of the Honeywell System.

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Malleable and Cast-iron-pipe Fittings

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OSHAWA

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Satisfaction assured

The best fixtures you can use for self-closing work in Hotels, Public Buildings, or elsewhere, are

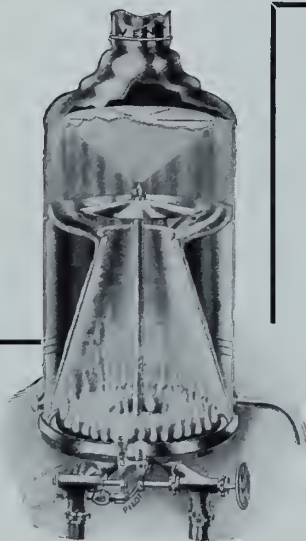
EMPRESS FIXTURES

They are in use throughout the Dominion and have more than "made good." The EMPRESS line is noted for its accurate threading, superior finish and exact fitting. Give the EMPRESS line a fair trial; you will be delighted with the result. We are also makers of the famous "EMPIRE" CLOSETS and a full line of Plumbers' supplies and brass goods. Better get acquainted with our prices.



Write us to-day. We ship same day as we receive orders.

The Empire Mfg. Company, Limited
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Model "D" Non-Vent.

Rapid
BATH HEATER

(VENT OR NON-VENT)

Hot Water Instantly

"Rapid" Bath Heaters have been tested by leading engineers and found to be over 92% efficient.

For many years they have been tested by thousands of users and found to be the most practical and satisfactory.

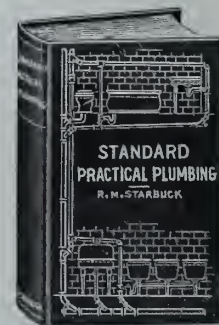
Canadian Plumbers Can Build Business

with the RAPID BATH HEATER

The prices are right—The Heaters are absolutely guaranteed—and when once sold they stay sold and sell others.

If your jobber cannot supply you, write us direct.
Complete information, prices and description upon request.

RAPID HEATER COMPANY
GRAND RAPIDS, MICHIGAN, U.S.A.



JUST OFF THE PRESS

Standard Practical Plumbing

By R. M. Starbuck

347 SPECIALLY MADE ILLUSTRATIONS

PRICE \$3.00

"Standard Practical Plumbing" is indispensable to the Master Plumber, the Journeyman Plumber, and the Apprentice Plumber. As the book is specially strong in the exhaustive treatment of the skilled work of the plumber, it commends itself at once to every one working in any branch of the plumbing trade. Send for it to-day.

TECHNICAL BOOK DEPARTMENT

MACLEAN PUBLISHING COMPANY
143-149 UNIVERSITY AVENUE - TORONTO

I'M
NYE
the Die
Man



The Manicurist and the Poker Player Hold a Lot of Hands in Their Time!

Some are warm hands, some are cold hands, some are
flushes and some bobtails,

But the Hand that Rocks the Cradle has Them all Skinned a Block!

And that is the hand you held in the moonlight and the hand you put
a ring on, and the hand that darns your stockings and sews placards
on the basement of your toga when you slip on a roof and strike a knot
or a nail!

Yes, it's the same hand!

And what about the owner of that hand?

Well, you promised to love and protect and care for her—and that night
you made a mental resolve that you would do your darndest for her!

ARE YOU?

If you are not using Nye tools, you are false to that oath, because Nye tools make work
easier, money more plentiful, time less a factor and buy shoes for the babies?

A man with Nye tools doesn't need to buy a great heavy cradle, "one that lasts a long time"! He can afford
to buy a new one every few years and give the little woman a change--besides styles in cradles change just as they
do in millinery! When I was a yearling they rocked me in a regular old horse trough sort of a cradle, but I've
noticed since that go-carts and joggle-jiggles seem to be all the rage and babies have to be in style as well as other
folks!

So I say, use Nye Dies, in fact all Nye Tools, make more money and give more to the wife! Old Doc Nye will
make home happy for you. He isn't a "homeo" or an "ala"; but his medicine cures. Send for a trial bottle free.

THE NYE TOOL AND MACHINE WORKS
124 North Jefferson St. CHICAGO, ILL.

"NYE" the Die Man



CAST IRON FITTINGS

Being manufacturers of Cast Iron
Fittings exclusively, we are natur-
ally in a position to give quality the
first place, which accounts for the
high standard maintained.



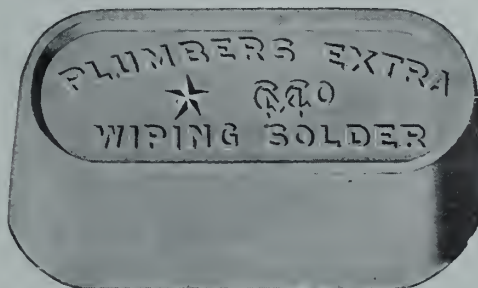
That our fittings are being recog-
nized by the trade as a standard is
proven by our largely increased sales
which have made the installation of
additional machinery necessary.

Standard Fitting & Valve Co., Ltd. - Guelph, Ont.

GOOD QUALITY OUR FIRST AND HIGHEST AIM

If you want
a first class
joint, use

**EXTRA STAR
WIPING SOLDER**



The Solder
with the tin in

The Solder
with a reputation

The Canada Metal Co., Ltd., Toronto

Try a business card in
Plumber and Steamfitter

IT WILL PAY YOU

positions there. You may find just what you want.

to watch our Condensed
Ad columns. There
are many money-making

The Lines of Genuine Worth!

Knowledge and widely-extended experience, together with the use of best materials ONLY, have combined to produce the

KING BOILER

which will be found without a peer in design, workmanship and finish. And because the "King" has solved the problem of perfect combustion and internal circulation, its heating power is greater than any other boiler.

The "King" boiler is equipped with a special shaking apparatus, which is a revelation to those who are only acquainted with other grates.

The special design of the "King" Combustion Chambers and Waterways guarantees a maximum amount of heat from a minimum fuel consumption.

Can you afford to recommend any boiler which is not as good as the "King?"



KING RADIATORS

are thoroughly tested and guaranteed prior to shipment, and the liability to defects or leakage practically eliminated.

KING Radiators are made in two styles ONLY, Plain and Ornamental, thereby making your problem of matching easy when further installation is necessary. Your customers when purchasing KING Radiators obtain every foot of Radiation they pay for.

We carry large stocks and you can rely on getting your requirements filled with despatch.

May we quote you on your Steamfitters' Supplies? We carry a complete range and are quoting very low prices.

WRITE US.

Steel and Radiation, Limited
FRASER AVENUE, TORONTO

TORONTO SHOWROOMS -
80 ADELAIDE STREET EAST

MONTREAL SHOW ROOMS AND
SALES OFFICE: 138 CRAIG ST. WEST

STEEL AND RADIATION AGENCIES IN ALL THE LEADING CITIES



Plumber and Steamfitter

and Sanitary Engineer of Canada

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ters, Sanitary Inspectors, Heating and
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TORONTO, MARCH 1, 1911

PLEA FOR A BROADER OUTLOOK.

The following excerpt from a speech by Lieutenant-Governor Thos. F. Conway, of New York, at a dinner of Master Plumbers, is well worth perusing:

"I believe that among the business activities of the state and country, none has been more instrumental for good than the calling you follow and this is good citizenship. Sanitary plumbing and sanitary methods have had more to do than any other one thing that is accountable for the lessening of the death-rate in our cities. But while you are pursuing your profession with success, you should remember that you are only one branch of the great business-system of our state and nation. Do not forget that your business is interwoven with and dependent upon the prosperity of the other great business interests of our state. It behooves us not only to become masters in our trade and profession but deeply and earnestly to study those principles which underlie and make all business success.

"Let us not rest with the idea that we have gone so far that we have reached the end of our possibilities. Let us rather use the great results we have already accomplished as stepping-stones to help us press onward in the great work of civic and national development. In every community in which plumbers live and succeed in business there is food for serious thought, and the reason for their success in business is bound to be reflected in every other business. Each of you can contribute to reforms which are needed, and can help to reform public opinion in matters where reform is needed."

The sentiments expressed are indeed uplifting in tone. No man can be a good citizen who narrows his sphere of activity and usefulness to the occupation that he follows. His interests should include the welfare of his municipality and country, as well as matters purely personal. Also, the above contains a splendid argument why men should work for the advancement of their trade, as well as for the success of their own particular business.



AN AD. WITH A DOUBLE MORAL.

When the largest departmental store in the country sees fit to devote a full page advertisement to bathroom specialties, it is a pretty sure sign that the demand for such goods has grown to very considerable proportions. Such an ad. represents a heavy outlay of money; in addition, it must be considered that the store in question

has a multitude of other varieties of goods, which require to be sold, and the fact that bathroom fittings and supplies were deemed of sufficient importance to displace everything else, is a telling evidence of the belief of the departmental store managers in the importance of the line. How many master plumbers have awakened to the same self-evident truth?

The ad. in question has a double moral. It shows that the trade in bathroom specialties, which rightly belongs to the plumber, is drifting elsewhere. If the departmental store can afford to feature sales so prominently, it must have a good business established in that department. It is quite true that the indifference of a large percentage of the trade has resulted in people looking elsewhere for the small accessories, which they fail to find in shop of the plumber. Many master plumbers do not carry such goods at all. Others handle stocks but do not make any effort to push them. The departmental store, in the meantime, is getting the trade.

It is not, of course, too late to remedy this condition of affairs. People must go to the plumber when they put in a bathroom equipment. He has therefore the first chance to sell them accessories and, by taking advantage of his opportunities, he can easily work up a good business.



A PRESIDENTIAL MESSAGE.

In a letter appearing in this issue, President Cooper, of the N. A. M. P. urges all master plumbers to cast in their lot with the associations now formed and thus pave the way for better organization.

The view taken by the president is that a man's success in business depends to a considerable extent on what he can learn from others. Experience is one of the wisest of teachers; and the experience of other men is just about as valuable as your own. Being less dearly bought, it is in some respects more valuable. To correct personal shortcomings in business, the president urges close communion with other members of the trade; for by that means, it is possible to mark, and avoid, the mistakes of other men and to imitate them in their methods which lead to success.

The future, of the plumbing associations depends on the interest displayed by individual members of the trade. The message in question, and all literature of a like nature, is therefore commended to each reader as worthy of deepest consideration.

ENFORCE PLUMBING BY-LAWS.

An agitation has been stirred up in Ottawa over the failure to enforce the plumbing by-law, the blame for which is laid at the door of the health department. It is alleged that, owing to civic laxity, landlords have been evading the by-law with impunity and the city abounds with houses in an unsanitary condition. The situation has become such that citizens are demanding a radical revision of the plumbing by-law, in the belief that it does not adequately cover the ground. It is pointed out, however, by master plumbers that the by-law, as it stands, is as near perfect as any legislation of the kind in Canada.

The situation in Ottawa points the moral that strict enforcement of health regulations is in the best interests of all concerned. All houses, which are fit for the installation of plumbing, should have proper sanitary appliances. It is a point worth consideration whether landlords should be permitted to erect houses which are not good enough to allow plumbing installations; surely such houses are not fit for habitation by human beings. Now-a-days sanitary appliances are regarded, not as luxuries, but as absolute necessities for the preservation of health. Municipalities have advanced to the stage where they are prepared to legislate in favor of proper plumbing; is it not time that they went a step further and saw to it that such legislation was properly enforced?

The suggestion made by one Ottawa master plumber that a plumber be given a seat on the board of health is a good one. With a practical man closely in touch with the inner working of the department, stricter adherence to the provisions of the by-law might be expected.

**PRICE CUTTING IS CONTAGIOUS.**

Constant repetition is not always considered the best way to arouse interest in a subject, but there are some topics to which it is necessary to revert continuously, even at the risk of being judged tiresome. Price cutting in the plumbing trade is just such a topic. The tendency to cut prices is so marked and the effects so extremely detrimental, that it becomes a duty to never let the matter drop until the practice has been eliminated as far as it ever can be.

An incident has come to notice which will bear some comment. Recently a firm tendered on a school contract and got it for \$118. They found when the work was done that they had lost a fairly wide margin. Since then another job, of a similar character and involving quite as much work and material, has been let to another firm at the almost unbelievable price of \$50. Why the latter firm has undertaken the work at such a ridiculously low figure is not apparent on the surface. They stand to lose heavily, because fixtures must be bought for hard cash, and the work must be done and paid for. No sane business man could unwittingly figure a price so wide of the mark. Apparently, the firm had a motive for taking this contract away below the bare cost margin.

It does not require much speculation to perceive the damage that such a course entails. Not only has that firm sustained a loss, but it has laid all members of the trade in that locality open to trouble and annoyance in the future. With such a low price precedent staring them in the face, how can other plumbers in the future claim, and secure, just and sane remuneration for work along the same line? The price cutter is a dangerous factor in the trade; particularly dangerous because his example is prone to prove contagious. The sane master plumber should avoid the price cutting germ as earnestly as he would strive to dodge the smallpox microbe or the measles.

EDITORIAL BRIEFS.

"Accelerate Sales of Accessories" is an alliterative way of wording one of the most pressing needs of the plumbing trade.

* * *

By becoming an active member of his home association, the master plumber does his share toward the improvement of current conditions.

* * *

Concealed traps are criticized by the plumbing inspectors of America in annual session. This question has been often discussed and opinions are widely divergent.

* * *

The farmer and the plumber have not met as often in the past as they will in the future. The need of proper plumbing and heating is being recognized by the farmer.

* * *

The London tin syndicate just let go of the situation long enough, to use a modified form of a common but expressive phrase, to salivate their palms. The syndicate's grip on the market is now firmer than ever and prices keep going up.

* * *

When a plumber gets the price cutting germ into his system he evolves a form of disease, the most marked symptom of which is an eager desire to hand his money over to strangers. The disease is infectious and often several in the same community will be seen vieing with each other in the liberality with which they give their cash away.

* * *

Plumbing by-laws were made primarily to be enforced. Why not enforce them? A city might have by-laws containing provisions calculated to create almost Utopian conditions but of what use would they be, if tucked away and forgotten in the civic archives? Legislation is the first step; enforcement is the second. The second is fully as necessary as the first.

* * *

There is a decided tendency in trade conditions to brighten up. Business is getting brisker and the plumber is finding it necessary to get out and hustle again after his two months of comparative quiet. It is predicted, not in a sense of exaggerated bombast, but after a calm and business-like analysis of prospects, that 1911 is going to prove a "bumper" year in the plumbing trade.

* * *

During a recent convention of master plumbers at Waterloo, Iowa, a newspaper came out with the startling heading: "One Hundred Plumbers Shot." Readers were relieved to find, on perusing the paper, that the shooting had been done with a camera but the moral of it is that newspapers should not print such misleading statements. Of course, the mistake might have been worse; the heading might have read "half-shot."

* * *

An American plumbing paper published the names of about a dozen men who had died during the year, among the list of those who attended a state convention. The Plumbers' Trade Journal propounds the query: "Can it be possible that the wonderful influence of the master plumbers' organization has communicated itself to terrestrial realms, and that the spirits of these craftsmen are representing the Illinois State Association beyond the river Styx? Or was it the intention of our 'E. C.' to intimate that the Springfield convention was a meeting of 'dead ones'?"

Oshawa Plumber Moves Into Up-to-date Shop

Wm. D. Muckler has a Large and Attractive Store—He Carries a Stock of Bathroom Accessories and Finds Them a Paying Line—Learned Trade in Kingston.

After four years of earnest endeavor, during which period of time he has worked up a splendid trade, Wm. D. Muckler, of Oshawa, has opened a thoroughly up-to-date plumbing shop on Simcoe Street, two illustrations of which are given. He started in Oshawa in a more humble way, having had headquarters in the rear of another store but gradually his connection became widened and his business grew to such proportions that a larger establishment was necessitated.

Mr. Muckler learned his trade with McKelvey & Birch, of Kingston. He first started in business on his own account in Kingston, but subsequently moved to Ottawa.

As will be seen from the accompanying illustrations, his new store is capacious, bright and attractively fitted out. He carries a splendid stock and displays it more effectively than is done in a great majority of plumbing shops. In addition to the regular stock, he carries a good assortment of bathroom accessories. In the wall cabinet, shown in the one picture, is a complete stock of such goods as soap-trays, glass holders, towel racks, etc. On the wall close at hand are seen a variety of mirrors, mostly of an expensive variety.

"Have you found accessories a good line?" he was asked.

"Splendid," was the answer. "We have met with a good demand, even for

the more expensive articles. Undoubtedly, bathroom accessories are becoming a necessary part of every plumbing stock."

Mr. Muckler is a comparatively young man and has a splendid business career ahead of him. At present he engages six helpers, including several apprentices. He has already in hand a number of im-

portant contracts, including the remodeling of the plumbing in Fred. Cowan's house, Oshawa. He undertakes hot water heating, low pressure steam heating and gas fitting, in addition to all plumbing work.

The pictures show the front of his store only. At the rear is a stock room, where a large assortment of plumbing supplies is carried, and behind that again is a work-shop.



View of Shop, Taken from the Rear



Shop of Wm. D. Muckler, Oshawa, Taken from the Front.

WATERWORKS FOR RIDGETOWN.

Ridgetown, Ont.—Following a favorable vote on the plebiscite taken in January, the Ridgetown town council has decided to carry out the work of constructing an up-to-date waterworks system. F. W. Farncomb, C.E., of London, has been instructed to prepare the necessary plans, specifications and estimates. While the town has excellent railway and other facilities to offer new industries, the lack of water has hitherto been a serious handicap.

WILL ANNOUNCE WINNERS.

The Honeywell Heating Specialty Co. will announce the results of their contest in the April 1 issue of Plumber and Steamfitter, together with the winning letters.

Annual Meeting of American Plumbing Inspectors

Public Drinking Cup is Strongly Condemned—Opinion Voiced that Number of Fittings Should be Reduced—Concealed Partitions on Traps Pronounced a Menace—Illustrations of Unsanitary Installations Should Not be Allowed.

At the sixth annual meeting of the American Society of Inspectors of Plumbing and Sanitary Engineers, held at Milwaukee, many topics of vital interest to the trade were discussed.

The first question taken up was the abolition of the drinking cup. Following an address on this subject by E. C. Stover, of Trenton, N.J., there was a lively discussion and the following resolutions were adopted without a dissentient vote:

First—The American Society of Inspectors of Plumbing and Sanitary Engineers, at its sixth annual convention, held at Milwaukee, Wis., February 6-8, 1911, do advise that in all public schools and in all other public places, the old form of drinking-cups be abolished and their use be immediately discontinued.

Second—That in public schools and in all other public places, where drinking water is furnished, both in old as well as new construction, the members of this society do advise the prompt provision of some form of bubbling-cup drinking-fountains, that supply fresh drinking-water not contaminated in any way by the former users, as the best sanitary method of protecting the health and lives of users of said public drinking-fountains.

Reduce the Number.

A paper on "Cast-Iron Soil-Pipe Fittings," by R. R. Rust, was read, the main point made, being that the number of fittings should be reduced. It was suggested that reducers be used instead of the infrequently used reducing-fittings and the making up of offsets on the less used sizes of pipe by bends and extension-pieces. A minimum weight for each fitting should be the most important consideration in such standardization.

Concealed Traps a Menace.

"Should Plumbing Ordinances Prohibit the Use of All Traps Having a Concealed Partition?" was then presented by H. J. Luff, Cleveland, O. Mr. Luff regarded concealed partitions on all traps a menace to the efforts of the sanitarians to secure perfect house-drainage construction. He considered that all such concealed partitions, except where the seal of the trap was plainly visible, should be prohibited, not only in district, city, county, or state, by individual action, but that national prohibition should be secured.

Is Harm Done?

"A thought is a very small thing but its influence may change the whole course of the trade. It may elevate or lower the standard of perfection."

The above sentences appeared in a paper by A. C. Shaver, Pasadena, Cal., on the harm done by plumbing catalogues showing unsanitary installations. It was claimed that manufacturers took great care to place before the public illustrations of their fixtures and wares in the most perfect form possible but that equal care was not taken in showing the piping installations.

A committee of three was appointed to draft up a suitable resolution embodying the opinion of the society on this matter.

Slides Were Shown.

An interesting feature of the programme was the showing on a screen of slides illustrating types of bath-traps and similar plumbing devices.

A. C. Shaver, of Pasadena, Cal., then placed on the screen a picture of a public-comfort symbol. He told of his success in educating Pasadena merchants to the importance of providing public conveniences. He suggested to the association that this design be adopted by it as a national public-comfort mark. This was done and a resolution ordered prepared concerning the sentiments of the association.

Frank K. Chew, New York City, next brought on the screen two slides showing a new sanitary feature in the form of a lavatory, with a receptacle as base. This is the invention of Wales O. Berkeley, Potsdam, N.Y., and is the direct result of the public-comfort crusade, commenced so aggressively at the Trenton gathering.

W. H. Jennish, Waterloo, Ia., presented a lantern slide illustrating a suggestion of a new soil-pipe fitting, to be used in residence work.

Favored Separate Vent.

A motion was made that the association go on record as opposed to anti-siphoning or resealing traps and in favor of a separate vent for each trap. The discussion that followed brought 50 per cent. of the members to their feet in quick succession. Distinctions between venting and reventing were made and the possibility of placing traps at different distances from the stack without reventing was considered. The contention was made by several members that distance did not matter and that the fouling area of the piping was the point to be considered. In support of this, the security of the seal in water-closets was cited, under varying distances. At the end of this battle of opinions the original motion was adopted.

Election of Officers.

The election of officers then took place, resulting in the following selections for direction of the society's affairs during the current year: President, Martin Conroy, St. Paul, Minn.; first vice-president, John Heffernan, Houston, Tex.; second vice-president, Lawrence J. Lawler, Pittsburgh, Pa.; secretary and treasurer, Thos. J. Claffy, Chicago; board of directors, H. K. Beatty, Pittsburgh, Pa.; Edward Quinn, St. Louis, Mo., and Edward Donahue, Peoria, Ill.

Invitations to the association for the holding of its next annual convention at Washington, Pasadena, St. Louis, and Atlantic City were then read. St. Louis was selected as the favored city, and the date of the convention established as May 7, 8 and 9, 1912.

Plumber is Made a Lord

Berlin, Feb. 21.—Harry Plate, a plumber of Hanover, who attained the great distinction of being raised to the dignity of life membership in the Prussian House of Lords on the Emperor's birthday, is the first artisan who has ever attained such a position.

The new member of this most exclusive body is not a mere theorist, but a man who has had to work at his trade for his living, and he has passed through every grade. He served the usual four years' apprenticeship, then packed his tools and for several years tramped through the German states, Switzerland, Italy and France, working wherever he could find a job. Finally he settled in Hanover, where he eventually set up independently and became prominent in the plumbers' organization and president at several artisans' congresses.

The Prussian House of Lords has hitherto consisted exclusively of members of the nobility, great scientists and educators, manufacturers and commercial men, prominent bankers, mayors of cities and retired military and naval officers.

In selecting Harry Plate to join their councils his Majesty has carried out a request formulated in a petition from the last artisans' congress for representation in the lawmaking bodies of Prussia, and this self-made man was indicated to him as the best possible choice he could make for the honor.

Master Plumbers' Ball a Great Success

Toronto Association Gather at McConkey's—About 300 Present
—Musical Programme, Dancing and Cards Make Up Enjoyable
Evening—One of the Best Social Events on Record.

Toronto.—The "At Home" given by the Master Plumbers' Association was one of the best events of its kind ever conducted by the Queen City plumbers,

tions rendered by the very best of talent and was enjoyed to the utmost by all present.

Mrs. A. F. Passmore rendered "Carissima" in her usual good voice and received a most enthusiastic encore, responding with a lighter number which found equal favor. Mrs. Passmore's work is deserving of the highest praise; her rich contralto voice possesses both power and sweetness and covers a remarkable range.

Mrs. F. S. Score's rendition of a pretty Creole love song was graced by sweetness and finished tone, winning immediate favor. As an encore number she sang "Star of my Life" effectively. Her selections were much enjoyed.

Vernon Gearing was heard to splendid effect in, "Hail, hail, King George"—a selection which suited his rich baritone voice admirably. Mr. Gearing's work was characterized by good range and power and he had to respond to an encore.

Charles Emery created infinite amusement with his humorous sketches. The introduction of hits on well-known master plumbers proved a good feature. Mr. Emery's witticisms put the assembly into right good humor and established him firmly in the favor of all.

One of his best numbers was a song entitled "The Soldier and the Plumber,"

interspersed with short monologue skits.

A regiment of soldier boys are out upon inspection,

Their uniform and step and style are what you'd call perfection!

They wheel and turn, and shoulder arms, with soldierly precision;

And then to be a Son of Mars becomes your wild ambition.



MRS. A. F. PASSMORE.



CHARLES EMERY.

is not the very best. Members, who still retain pleasing recollections of previous social events, declare that, in point of enjoyment and general interest, it can safely be ranked with anything attempted in the past. It was largely attended—fully 300 being present—the music was good and the supper likewise. Nothing was lacking to make the evening thoroughly enjoyable and the time sped by only too rapidly. "Make it an annual event," was the almost universal opinion voiced at the close.

The function was ably conducted and much credit is due the committee for the completeness of the arrangements and the smoothness with which they were carried out. Everything went with a swing and the programme had been brought to a conclusion at a fairly early hour, it being about 2 o'clock when the assemblage broke up.

McConkey's handsome ball rooms had been suitably decorated for the occasion and presented a most pleasing appearance. The guests began to arrive at 8.30 and by 9 o'clock the rooms were filled. The ball rooms did not claim all of the guests, however, many preferring to spend the evening at cards. The card rooms were filled all through the evening and in the men's cloak room a number of "Stag" tables were made up.

The Musical Programme.

The musical programme was given first. It consisted of a number of selec-

You think it fine to be in line, with musket on your shoulder,
But suddenly your wild desire will grow a trifle colder.

A man steps up with gleaming sword, his figure is commanding,

And shouts out orders to the men beyond your understanding.

Concert		Committee	
Mrs. F. L. Score	Mr. Vernon Gearing	G. H. Cooper	G. F. Frankland
Mr. C. Estery	Mr. A. F. Passmore	A. F. Passmore	J. R. Seager
Mr. R. Sagers	Accompanist	E. T. Needham	J. Wright
		C. Hicks	A. H. Read
		H. Pepper	W. C. Schultz
Dances		Engagements	
1. Waltz	Caribou	1.	
2. Three-Step	Sunshine	2.	
3. Two-Step	Silver Bell	3.	
4. Polka	Dal Segno	4.	
Extra, 1. Waltz		Extra	
5. Lancers	Forest City	5.	
SUPPER		6.	
6. Waltz	Come Josephine, etc.	7.	
7. Lancers	New York Echoes	8.	
8. Polka	Dixie Blossoms	9.	
9. Two-Step	Dublin Dances	10.	
10. Waltz	Meet Me To-Night in Dreamland	Extras { 1.	
Extras { 2.		2.	
BALL'S ORCHESTRA			

The Programme Cards, Showing the Names of the Committee in Charge.

(Imitation of Captain's orders.)

"Comp'ny, Shoul'er, arms,
B-y R-i, B-y Lef. Bat'al'n
For-r-r-r-r-r-'ard marsh!

And yet we wonder why our speech
should be so bent and broken,
When we are taught from infancy, our
language as it's spoken.

Jack Passmore 's the only plumber
throughout the whole creation.

That has the power to fix the pipes and
so give ventilation,

And though he makes the prices right
and has the right to raise them

How often through his carelessness you'll
find that he'll not raise them.

For instance if the conduit pipe they
wanted it extended,

They'd call upon George Cooper to see
if he could mend it.

George says, "The job it is too big I'll
give it to McArthur."

But when Mac started on the job he
found that Rust was awful.

(Conversation between Geo. and Mac.)

"Say, Mac, I'd like to sell you a good
horse."

"Trot her out, then," said Mac. The
horse had the heaves so bad you could
hear him a mile away.

George says, "Ain't he got a lovely
coat?"

"Yes," says Mac, "I like his coat but
I don't like his pants."

Supper was served at 11.30 in the din-
ing rooms on the floor below. There
were a number of long tables set but the
majority were laid for four, and the
company was split up into jolly little
groups of that number. The tables were
prettily decorated with silver candle
sticks with pierced silver shades. A
good menu had been provided, to which
fullest justice was done. The company
did not linger long "over the demi-tasse"
but adjourned again to the ball rooms,
where the strains of music, provided by
Ball's orchestra, invited all to resume
the dance.

More couples were on the floor after
supper, many of the card players having
decided to finish out the programme.

The Firms Represented.

Many manufacturing firms and supply
houses were represented, among the list
being: B.O.T. Manufacturing, Standard
Ideal, Macdonald & Sons, Robert Mor-
rison, Jas. Robertson, Somerville Mfg.,
Standard Sanitary, Toronto Hardware,
King Radiator, Warden King, Gurney
Foundry, Monarch Brass, Taylor-Forbes,
Wheeler & Bain, General Brass, Domi-
nion Radiator, Steel and Radiation,
Canadian Steam Pump and Machine,
Builders' Supplies, Rudd Manufacturing,
Wolverine Co., Chatham; Anthes Foun-
dry, Ideal Mfg., Detroit; Johns-Man-
ville, Eureka Mineral Wool, Page-Her-
sey, Standard Machine and Tool, Toron-
to Furnace, and others.

Among the representatives were
Messrs. A. C. Phipps, MacArthur, D.
Worrell, J. Owston, J. Spence, Gouin-
lock, J. Bell, T. Allcock, E. Hole Gur-
ney, Sherlock, Brewer, Worthington, Mc-
Cord, Hobbs, Bechmeyer, Anthes, Cun-
ningham, Maxwell, Anton, Brash and
many others.

Practically all the big plumbing firms
of the city of Toronto were represented,
including Bennett & Wright, J. W.
McGuire, Fiddes & Hogarth, Maxwell
& Johnson, Ritchie & Co., Purdy &
Mansell. The attendance included prac-
tically all the members of the Master
Plumbers' Association, together with
their wives, sisters and sweethearts. It
would be no exaggeration to say that
the attendance was in the neighborhood
of 300.

After the Ball.

Dr. Hastings, medical health officer,
had intended to be present but was un-
able to attend owing to stress of work
in his department.

The piano was loaned free of charge by
ye olde firm of Heintzman & Co.

R. Soames acted as accompanist dur-
ing the musical programme.

Smoking was allowed in the cloak
rooms and the fumes got rather thick as
the evening wore on. "Putting on the
smoke test, you fellows?" queried one
man, as he put in his head at the door.

It is impossible yet to say how the
finances will shape out, but Chairman
Passmore declares that the committee
have not been guilty of the heinous sin
of under estimating and will come out
a little to the good.

"Best on record," was the opinion
heard on all sides.

Fred Heximer, Niagara Falls, was in
attendance.

Humphrey Lockhart, of Gurney-Massey
Co., Montreal, was one of the guests.
He will now be in a position to tell them
there how well the Toronto master
plumbers do things.

President Issues Urgent Appeal

Editor Plumber and Steamfitter:—
At the risk of being considered dry and
commonplace, I am going in the first few
lines to treat my subject from a purely
technical standpoint. The plumbing
business can roughly be divided into two
classes: 1. The active plumber and
steamfitter; 2. The passive plumber and
steamfitter. The former is the man who
invests his money in the business he
knows and runs it himself; the latter is
the man who puts his money in the busi-
ness and then lets a practical man run
it for him. To both classes I desire to

lay down one infallible rule, which is as
unalterable as the code of the Medes and
Persians—"Know yourself and know
your man."

It is an established fact that the
athlete with the best training breaks the
most records; the horse with the best
driver wins the most races; the fleet
with the best marksmen wins the most
battles. In business, as in sport, in fin-
ance, as in battle, it is the "man be-
hind" who is responsible for the result.
If you are in business for yourself and
find a balance at the wrong side of the
ledger, examine yourself and the me-
chanic who works for you. Investigate
your office methods and your staff. If
they are honest and capable, they will
welcome any investigation you may
make. A "stitch in time" has saved
many a business from ruin; if you are
not making money, the fault is in your
workshop or office. This applies also to
the man who has someone else run his
business. You should get acquainted
with your men and find what part of the
work they do the quickest and best, then
keep them at that.

Lock yourself in a room with yourself,
eatechise yourself, take stock of your
shortcomings and endeavor to correct
them. Study your competitors; find their
mistakes and avoid them yourself. Take
notice of his triumphs and imitate them.
The best way to find this out is by as-
sociation work, for when men get to-
gether, confidences will be exchanged. It
is natural for a man to retail his tri-
umphs and how he effected them; for
that is his hobby. With reference to
mistakes, as soon as one is recounted,
others will follow and all present will
fall into a reminiscent strain, telling of
their mistakes and shortcomings. It is
in the interests of our business to gather
in bodies—call them clubs or associa-
tions, or whatever you please—and it is
bound to benefit us all.

Stick to the business that you know,
for there is room in any business for the
right man. There are not too many
plumbing business, for instance, but too
many of the wrong kind. If you know
your business and have enterprise and
the natural spirit of hustle, the rest will
come. You will see how necessary it is
for you to become a member of our as-
sociation, so that you can help others
and he helped yourself. We can all
learn; not only can we learn but we can
often teach as well. Keep your finger
on the pulse of the association of which
you are a member.

In conclusion, I hope that all the
plumbers and steamfitters in this great
Dominion will get together in provincial
bodies and have for a motto, "All for
one and one for all." Then we will be
able to remedy evils now existing.

(Signed) GEORGE H. COOPER,
President, N.A.M.P.

Patterns for the Tin Shop

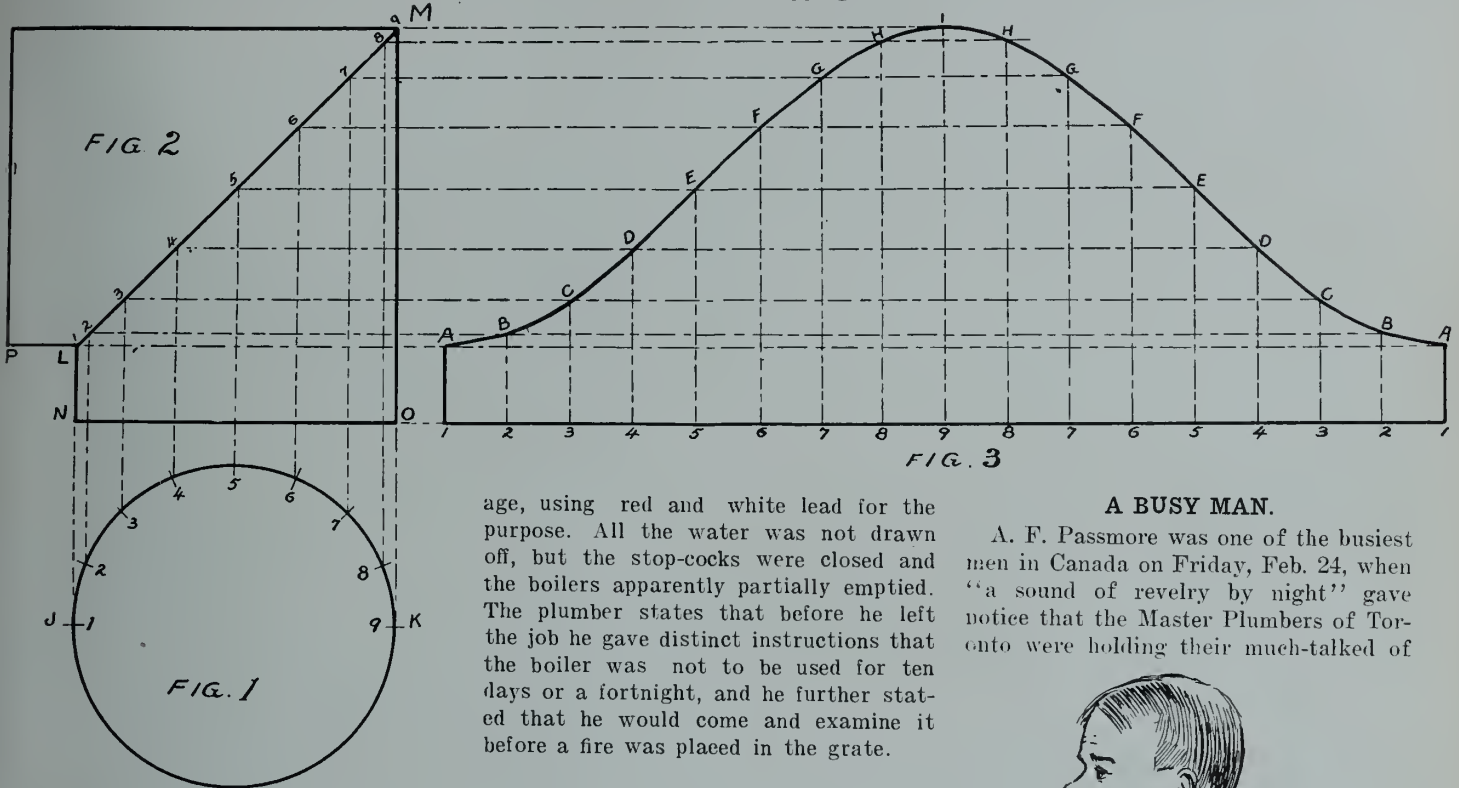
How to Make an Ordinary (Right Angle) Stove Pipe Elbow.

By Wm. J. Finnigan, Preston, Ont.

First, describe a circle of the required diameter as in fig. 1. Then extend the lines from I E K perpendicular and draw an elevation of elbow as fig. 2 care be-

circumstances appear to have been extraordinary. A plumber, according to the evidence at the inquest (for the accident was attended with one fatality), did some repairs to one of the back boilers with the object of stopping a leak-

has since sold a large number. In order to facilitate sales, Mr. Knox resorted to advertising. The accompanying illustration is a sample of the ads. used to boom the sale of the lockers. The ad. is, on the whole, a good one. The arrangement is sufficiently attractive to arrest the eye and telling arguments are adduced.



age, using red and white lead for the purpose. All the water was not drawn off, but the stop-cocks were closed and the boilers apparently partially emptied. The plumber states that before he left the job he gave distinct instructions that the boiler was not to be used for ten days or a fortnight, and he further stated that he would come and examine it before a fire was placed in the grate.

A BUSY MAN.

A. F. Passmore was one of the busiest men in Canada on Friday, Feb. 24, when "a sound of revelry by night" gave notice that the Master Plumbers of Toronto were holding their much-talked of

ing taken to have it a true right angle. Next draw the line L to M, then take the top half of circle fig. 1 and divide this half from J to K into 8 equal parts as shown. Now extend the lines from No. 1 to 9 perpendicularly until they intersect with line L-M. Now extend the line N-O horizontally as shown in fig. 3 and space this off to correspond with spaces in circle fig. 1. Next extend all of these lines perpendicularly then go over to line L-M and extend all the lines from No. 1 to 9 horizontally to the right. The points where these lines intersect with the perpendicular lines in fig. 3, will give you the desired profile. Draw a line from A to B, and B to C and C to D, etc., this will give you the exact profile of pattern. You will have to allow a little on this for your locks but the above development will apply to any size pipe.

A SERIOUS EXPLOSION.

There occurred last week, at Prince's Park, Liverpool, an explosion in connection with two kitchen ranges set back to back with boilers, connected by two pairs of flow and return pipes to a common cylinder. From the information which it has been possible to obtain the

SOLD MEDICAL LOCKERS.

Ottawa.—H. A. Knox, 340 Elgin Street, is a believer in bathroom accessories as a side line. He recently installed a stock of medical lockers and

**BEAUTY TONE
PURITY**

Are the features clearly shown in a new line of Modicine Lockers just received.

Prices are comparatively inexpensive.

EXAMINE THEM.

They are an ornament and a service to any bathroom.

H. A. KNOX

PLUMBING HEATING
340 ELGIN ST.
Phone 6-9-1.



at home and dance. As master of ceremonies, Mr. Passmore found so much on his hands that he was kept pretty busy, but he managed nevertheless to dance nearly every set, and it is not on record that he missed the supper. Our artist caught him at one of his busiest moments.



POINTS ON HEATING

By
CHAS. H. DENISON



Chapter 4.

In the previous chapter we considered several points relative to the boiler. Let us go after the radiators for a while. There are so many points upon which one can get into a bad mix up on the radiation, if they don't watch out or are not next to things.

Three very important points are the location of the radiator, the form of the radiator and also the manner in which it is connected to the system. Generally speaking, the radiator should be placed at the outside wall of the room. If there are two outside walls, like a north and a west wall, put the radiator in the northwest corner—if you can get it there. The construction of the home and the grouchiness of an ill natured house wife occasionally combine to knock the fitter out on the proposition and so, sometimes he must do the best he can under the circumstances.

Favors Indirects.

In case that I was compelled to place a radiator on the inside wall of a room down stairs (the first floor) where there was a strong exposure, I do not think that an extra allowance of ten per cent. would be at all too much to figure for the occasion. Better have a little too much, than to have to make an extra trip for the purpose of adding two or three sections "to make good on the job." Unless connected with some air cleansing apparatus, I am not in favor of the use of indirects. I know that we have heard much about "having pure air in the home and the benefit of the indirect as a means to such an end. Now, to those parties I want to say, go pull down the duct, take off the boxing and then look up through the indirect and you will be fully convinced that you were getting anything but pure air in the room heated by said indirect. The boys who have pulled down these contraptions know about what they are, in the case just mentioned. Seemingly, for the purpose of getting much iron in little space the loops of the radiators have been brought closer and closer together until there is but small space between them. Now while this may be all right in regard to some points, it has the effect of, to a certain extent, reducing the heating power of the radiator. For this reason

a fifty foot, single column radiator is more effective than a fifty foot two, or three column radiator.

Single Column Radiation.

Therefore, wherever it was possible, I would use the single column radiation, or if the space permitted, use the wall radiation which might be better still because you could set it low which would be some advantage for a tall radiator is not, foot for foot, as effective as a low radiator because the heat rising along the loops of the tall radiator becomes heated hotter as it approaches the top and when it gets there it is about as hot as is the radiator itself which same has the effect of reducing the transmission of heat near the top of the radiator.

When you come to take the low radiator the heat has but a short distance to go and so the air around the radiator is at pretty near the same degree of heat. Having got thus far with the matter it would be advisable to locate the radiator upon a permanent base, instead of merely planting it upon the carpet as is done in many cases. It will look better on a base, anyhow, even if the floor is a hardwood floor with the rug several feet distance from the radiator. Make it a marble or at least a slate base while you are about it and you will have an attractive and a mechanical looking piece of work. Unless one desires to have the wall back of the radiator and the ceiling above it discolored with a dirty looking smudge it will be well to use some one of the many devices along the line of a radiator shield to do away with this nuisance.

The manner in which the radiator is to be connected comes next in our considerations. No matter how good the boiler nor how perfectly the radiation may be figured and placed the best job ever can easily be put "on the hummer" by improperly connecting the radiator. Up to the present we are compelled to use valves and pipes for this purpose. There may come a day when it will be done differently. Now a slight sag in the steam main or the branch leading to the radiator will produce what is called a trap and by some a "pocket." The steam coming in contact with the condensation in said trap or pocket will produce a pounding noise

about the same as if one hammered the pipes with a wooden mallet. In case the pocket happens to be on an open tank hot water system it will "queer" the heating of the particular radiator or line of radiators on the far side of the pocket.

Therefore, it should be seen to that the workman leaves none of these traps on the mains or branches. If he is careless and does not seem to care, he should be fired and some one employed who will take pains with the work. The valves for the purpose of admitting the heat to the radiator are a most important point. It does not pay to use a cheap style of valve for they soon get out of order. In case the radiator is in a very public place where anybody is liable to be constantly turning it off and on, use a lock and shield valve in order to do away with interference. Packless valves seem to be in great demand and for hot water the quick opening valve is a decided relief.

The Air Valve.

There remains another point to consider in relation to the radiator and that is its air valve. There are but few things more annoying than an air valve that performs its duties improperly, sputtering, dripping water all over the floor or singing clean off the key. With some hot water arrangements, it has been possible to so connect the system as to dispense entirely with the air valves. However that may be, only the best of valves should be used, valves that are capable of a proper adjustment, so that when they are used they can be depended upon to give most accurate results. With a good reliable air valve on the radiator it is entirely possible to set the same so that any number of loops desired may be kept warm, referring now, of course to steam jobs.

The floor and ceiling plates are of such a wide variety that no special brand will be mentioned, only do not have them too light in their make up, for they will get more or less banging as the floors are cleaned. It remains to have the radiator decorated and this can be done by having it bronzed or painted according to the fancy of the owner, to harmonize with the furnishings of the room and the colorings of the walls and ceilings.

Heating Plant in Blackstone Hotel

A Low Pressure Vacuum System Installed in Large Chicago Building—The Indirect System is Used Principally for That Portion of Building Above the Fourth Floor.

In a previous issue a description was given of the plumbing work in the Blackstone Hotel, Chicago, which proved interesting, owing to the extensive nature of the contract.

The heating apparatus in the building, says the Metal Worker, installed by L. H. Prentice, is both direct and indirect, and consists of the low-pressure vacuum system. All return from both the direct and indirect lead to a tank, from which it is taken by boiler feed pumps and delivered to the boilers through a feed-water heater. That portion of the building above the fourth floor is heated principally by the indirect system, three induction units being used. Each unit comprises a primary heater, a main heater made up of Vento coils, furnished by the American Radiator Co.; also a Thomas & Smith air washer and a bank of cooling coil for summer use.

In the cooling coil carbon dioxide direct expansion is used at a temperature of 34 degrees F. Temperature regulation is effected by means of National Regulator Co.'s thermostats. The water for the kitchen, laundry and the baths is heated by Baragwanath heaters, also controlled by National Regulator Co.'s thermostats. All high-pressure steam piping is double covered with an 85 per cent. magnesium and sponge-felt covering and the low-pressure piping with a single covering of 85 per cent. magnesium.

Four Large Boilers.

The boiler plant consists of four 250-horsepower boilers of the tubular type arranged in single sets. They are equipped with chain grates driven individually by $1\frac{1}{2}$ -horsepower motors. The ashes are removed by a pan conveyor, delivering to the tunnel and alley. The boilers are faced with fancy brick to give the boiler-room a finished appearance. Water is fed to the boilers through a double feed main controlled by a feed water regulator and is measured by a recording and indication meter. There are two steam lines, a main and an auxiliary, of welded flange construction furnished by the Crane Company. The boiler plant furnishes steam for all engines, pumps and heating throughout.

The ventilation is cared for by a kitchen exhauster driven by a 40-horsepower motor, a basement exhauster driven by a 20-horsepower motor, a ball-room exhauster driven by a 15-horsepower motor and one in the basement of the same

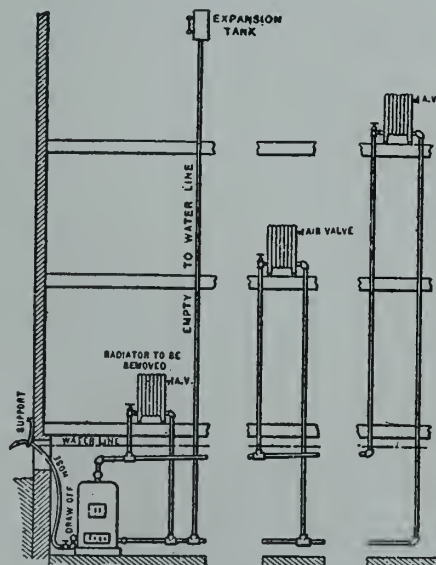
capacity. All portions of the building below the fourth floor are thoroughly ventilated by means of induction and exhaust fans, which are also motor-driven.

A garbage incinerator is located in the sub-basement of the hotel. All material to be disposed of, such as garbage, rubbish, kitchen offal, etc., is dumped into a galvanized iron chute leading from the kitchen down to a sorting pan located on the charging floor, where silverware and such valuables which may have been thrown in by accident are removed. From here it is dumped onto a drying hearth. The material is here held in suspension above the incinerating fire until dried and partially burnt and is then stoked as fuel to the clinker grates below, where it is finally burned to ash and hard clinker. A dust arrester is provided between the furnace and the outlet whereby fine ashes, burned paper, etc., are held from the outflowing gases.

The entire building will be cleaned by vacuum system. It is a six-sweeper plant and is operated by a rotary pump.

HOW TO REMOVE RADIATOR.

A problem which sometimes crops up is how to remove a radiator from a hot water heating system without drawing off all the water. One solution of this



problem is given in the following, reprinted from Metal Worker of November 21, 1903:

In the establishment of a successful heating contractor in one of the larger cities he has posted in a convenient spot, for the information of his steam

fitters, instructions for the removal of a radiator from a hot water heating system without emptying the system. By this method a radiator may be removed and repaired without capping the open connections, providing that the system is perfectly airtight in all its parts.

Fill all of the radiators and the entire system with water, being sure that all air is out of the system. Attach a hose to the draw off or emptying cock on the boiler in the cellar, run the other end of the hose to some point where it can discharge, and hold this end on a level which is slightly above the branch connections from the main in the cellar. Care must be taken that the hose connection does not leak, and it is absolutely essential that the end of this hose be kept at a height above the branch outlets from the main in the cellar or air will get into the system and empty all the radiators and cause a flood at the point where the radiator has been disconnected. Air cannot get into the system if the end of the hose is held at a level above the branches in the cellar.

When all these provisions have been carefully made the air cock on the radiator to be taken out can be opened. This will allow air to enter and the water in the radiator to slowly pass out. When all the water is run out of this radiator, and also out of the expansion tank and the pipe leading to it to a point on a level with the discharge end of the hose, as shown in the sketch, the radiator may be disconnected and taken out for such repairs or changes as may be required. When this is carefully done and the air valves, radiator connections and piping in the other parts of the system are absolutely airtight and reliable, a fire may be maintained in the boiler and the job run indefinitely, or until the necessary repairs are completed, and the radiator again put in place.

The sketch given herewith may make the instructions more readily understood. The end of the hose will be noted as running through the cellar window and supported at a height that provides a water line in the branch connections to the radiator which has been removed, and also in the pipe to the expansion tank.

An automobile factory is to be established at St. Boniface, Man. The cost is estimated at \$1,250,000.

Scovil Bros will erect a 5-storey building on the property adjoining their present store, St. John, N.B.

Among the building permits issued are British Columbia Telephone Company, covering the erection of new substation in Kitsilano, \$44,000; another to Mr. C. A. Godson, covering alterations to his block on Hastings street near Carrall, \$24,000.



The Question Box



Subscribers are Urged to Send Questions to be Answered, or to Comment on Letters Published. Descriptions of Jobs Done or Shop Kinks are Also Invited.

Reversed Circulation.

Editor Plumber and Steamfitter,—Being a plumber and an interested subscriber to your paper, I thought that I would like to ask a question or two of the question box. I have a fire-back in a large stove connected to an open wood barrel and it works fine. I have proven that the circulation reverses at night in cooling. This prevents freezing but in my experiment I have reason to believe that the closed tank does not act that way. Can you explain? A. F. A.

Vermilion, Alta, Feb. 8.

Looks rather to me as if it was a case of pay your money and take your choice. Here, according to the statement of the party above, the thing works natural in the day time, when the stove is fired up, while at night when the fire would be low, the contrivance up and bucks around and acts in a contrary manner, just like a mule who would not go forward across a bridge, but might be easily backed across. I fail to see how a thing can work fine half the time and yet work in a contrary manner the rest. If Mr. "A" will send in a drawing of the affair we may be able to tell him more definitely about it. Lacking the same, we are unable to give any very definite information. A reversed circulation generally comes from an improper manner of connecting the flow and return pipes, as has been shown in many of the different cases given. Mr. "A" can stop the water from going the wrong way by placing a swinging "check" on the return pipe if he so desires, although such a proceeding is not always the most desirable.—D. C. H.

That Abomination, the Cess-pool.

Editor Plumber and Steamfitter,—I desire to build a cesspool. How far should it be from the house and from the well? What should be its size? The soil is mostly sand and clay alternating. Trusting to see the answer in the next issue, I remain, "A. F. A."

Vermilion, Alta., Feb. 8.

We should advise you to get the idea of a cesspool out of your mind at once, for a more unsanitary, harmful contrivance than the average cesspool as gen-

erally constructed, would be hard to find. Unless built in a manner that would render it impossible for the matter draining into the pool to escape, you stand a good chance to contaminate the water veins under the surface for distances that no one can gauge with accuracy. Instances have been given where water, contaminated at one place, has brought about most disastrous results at places miles away. It is stated that the purification of the foul liquids that are in the cesspool is impossible without the aid of fresh air and the action of aerobes. We should advise you to make use of a small septic tank, the construction of which is not difficult and the cost comparatively moderate.—D. C. H.

Soldering Aluminum.

Editor Plumber and Steamfitter. —Will you publish in the next issue of your paper, The Plumber and Steamfitter, a description of the manner in which aluminum can be soldered? I think that I have seen such an article some time previously, but do not seem able to find it.

Digby, N. S.

W. L. H.

The article appeared in the "Scientific American" some time ago and we will give here the principal points that would seem to give sufficient information to enable one to do a good job of work.

In soldering the aluminum it is necessary to use a much higher temperature than when soldering some of the other metals. Aluminum does not alloy with lead, and so the lead solders are useless for this purpose. The solders used for aluminum are made of tin, zinc and a small proportion of aluminum and fuse at so high a temperature that it is very difficult to accomplish the job with a soldering iron, a blow pipe being used mostly for the purpose. It is stated that the surface of the aluminum is covered with a thin invisible coating of aluminum oxide which must be removed before the soldering can take place.

This coating can only be removed mechanically by abrasion which must be done at the same time that the soldering is going on. The aluminum must

be tinned. Heat the metal to a temperature higher than the fusion point of the solder used, meanwhile rubbing the surface with a stick of the solder itself, thus covering the exposed parts with the solder and removing the oxide at the same time.

Another point mentioned is that the solder will not flow into an aluminum joint similar to the action of other joints. So place on the surfaces to be united all the material necessary to sweat them together before the edges are brought into contact. The tinning and the soldering must be done in the most thorough manner or the joint will not last.—D. C. H.

The Heat Unit.

Editor Plumber and Steamfitter.—In the next issue of your paper will you be kind enough to give me an idea of just what the heat unit is, and greatly oblige.

Toronto, Feb. 16.

"Subscriber."

One of the authorities on the subject states that it bears the same relation to the heating contractor that the two foot rule does to the carpenter, or the pound to the grocer.

He further states that it is the unit of measurement and the common sense basis of all heating calculations, and the amount of heat required to raise the temperature of one pound of water one degree Fahr.—D. C. H.

Do Hot and Cold Water Differ in Weight?

Editor Plumber and Steamfitter.—Is there any difference in weight between hot water and cold water? An answer very soon will oblige.

Winnipeg, Feb. 6.

"Apprentice."

One cubic foot of water just at the freezing point is supposed to weigh about 62.42 pounds.

At 212 degrees Fahr. the cubic foot of water will be found to weigh 59.76 pounds. You can figure out the difference in weight for yourself.—D. C. H.

Esgett & Co., London, Ont.—"Would you oblige us by sending names of makers of Water Filters?"

Anti-Splash Filter Co., Owen Sound,

Plumbers Go After the Trade of the Farmers

Progressive Western Firm Keep Track of Possible Patrons in the Country Districts—Find it not Difficult to Convince Farmers to Install Home Conveniences.

The trade of the farmer is bound in time to become a source of much revenue to the plumber. The time is not far off when every farmhouse will have the home comforts which are now enjoyed more or less exclusively by the city residents. Steamheating and bathrooms are at present within the reach of the farmers but few avail themselves of the opportunity. This is due partly to the fact that they have been accustomed to getting along without modern conveniences and do not therefore feel the necessity for them; it is also partly due to the indifference of the plumber. If members of the trade saw fit to cultivate the farming trade, the results would be in the nature of an eye-opener.

Some plumbing firms have perceived the splendid opportunity, for widening their business, thus presented. A firm in Lumsden, Sask., are among the most progressive in this respect and are rapidly building up a splendid trade in the agricultural districts surrounding Lumsden. In response to a request from Plumber and Steamfitter for information as to the methods adopted by his firm, one of the firm writes:

"We are located in a small town and it becomes almost a necessity for us to go after some farm trade. As soon as we hear of a farmer who is going to build or improve his residence, we make it a point to see him and get him interested in the question of extra comfort and conveniences which we can give him. We try and convince him that he will enjoy greater comfort and save money as well. It is not hard to prove that a hot water or steamheating system (properly installed) will save money in the fuel line.

A Splendid Record.

"I may say that we have only been in business about a year and have sold fifteen heating plants and seven bathroom outfits. Five of them were for farmers. One of the farmers—as referred to in your last issue—is putting in the following: One 5 ft. enameled bath, one low down closet, one lavatory in bathroom, one lavatory in each bedroom on the first floor (there are four bedrooms) one 36 inch sink with an 18x18 drain board in the kitchen, one 30 inch sink in the back vestibule, as a wash-room for the men and a hot water heater of 1,100 feet capacity.

"I tell you this just as an illustration of what can be sold to a farmer. The man in question is a good, smart,

progressive, young Canadian farmer. It is a mistake to consider farmers as 'rubes'. Nowadays, they are keeping right in touch with current events.

"I feel that the plumbers and fitters have not been giving enough attention to the farmers—just as you have often mentioned in back issues of your paper. All they need is to be shown the advantages of modern appliances in their homes. The writer has been trying to sell a pneumatic system to some of the farmers in this district but so far has not disposed of any. The time is coming, no doubt, when there will be a big demand.

Look into Question.

More telling testimony could not be secured, to point out the splendid opportunity that lies before every plumber. It is not difficult to convince the average farmer of to-day that he needs home conveniences as well as the city man. Prosperity has marked the farmer for his own of late and, consequently, he has more money to spend. One of the main reasons why so few have heating and plumbing systems installed is that the plumber has not bothered himself to the extent of going after that trade.

THE PERFECT PLUMBER.

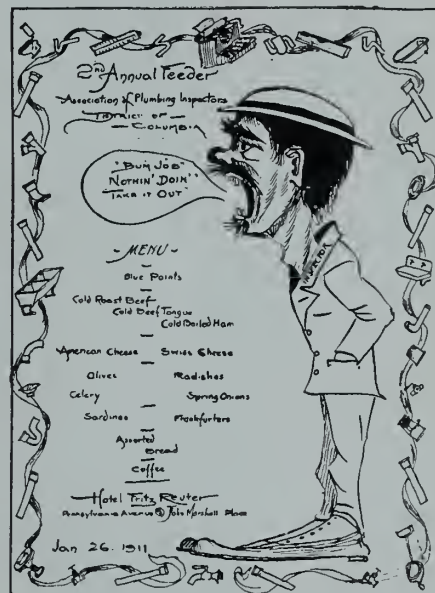
Speaking at the annual dinner of the members of the Hull (Eng.) District of the Institute of Plumbers last week, J. P. Cox, President, said the plumber of to-day had to know all about water and water supplies and have an expert knowledge of sanitation; he must also know all there is to be known about sewage disposal and be able to test drains. He was expected to have a knowledge of hygiene and a perfect knowledge of chemistry. He must know something of hydraulics and hydrostatics, but above all he must be trustworthy and truthful. The Institute of Plumbers held that no good could be got out of an untrustworthy or an untruthful plumber. The plumber must, if he carried out his work in the way the Institute desired, be a powerful ally to municipalities and a "veritable God-send to medical officers of health," by helping them to fight dirt, disease and death. Slovenly plumbing brought these three brethren in its train. A difficulty had arisen in connection with the architects and an equally great difficulty arose from the way in which builders dealt with the sub-contracting plumber. There was not another trade affiliated with the builders which had to discharge such onerous responsibilities

as the plumbing trade, and yet there was no other trade which had to put up with so much inconvenience. The plumber was always the butt of the builder, of the architect, and of everybody else.

THE PLUMBING INSPECTOR.

The master plumber can sometimes be heard to voice harsh, almost rude, opinions on the subject of the plumbing inspector. To many plumbers, the inspector appears a petty tyrant, a carping critic, armed with arbitrary power which he uses unflinchingly.

This opinion is not general, but its existence in some circles and at some times is recognized by the inspectors of Washington, D.C. At their annual din-



ner, the menu card bore the reproduced caricature of the inspector. It was not intended to be the likeness of any particular inspector, but was supposed to show, with some degree of accuracy, the qualities ascribed to the species by the master plumber at times when his work is criticized or condemned. Note the uncompromising attitude, the stony stare and the cruel finality of the words.

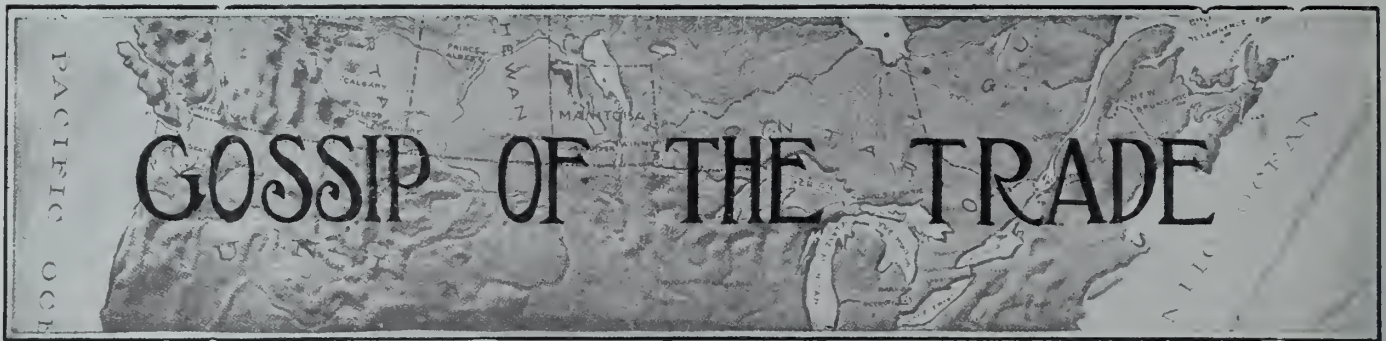
Preventing Evaporation in Traps.

Editor Plumber and Steamfitter.—In some of the buildings that I sometimes have charge of, it is not practical to keep up a fire just to keep the plumbing from freezing, when the owners are away for some time and the building unoccupied. How can I prevent the gases from the sewer getting into the house, when the traps must be emptied from the water?

Montreal, Feb. 21.

G. H. D.

Plumbers under such conditions generally fill up the traps on the plumbing system with some heavy oil that will not dry out very rapidly, and just before the house is to be occupied make it a visit and put the system again into proper running order.—D. C. H.



News Brieflets.

Archambault & Dube, tinsmiths, of Knowlton, Ont., have dissolved partnership.

James & McClughan have secured the plumbing and heating contract for the new Y.M.C.A. building at New Westminster, B.C. The amount is \$6,000.

S. P. Gourlay & Son, of Welland, have the contract for installing the heating apparatus in the new English church manse at Fort Erie. It will be a hot water heating system.

J. H. Harding, of Wroxeter has purchased the tinsmithing, plumbing and heating business of John Douglas, in whose employ he has been for some time.

The creditors of J. J. Long, Welland, held a meeting and decided to close out the estate. The liabilities were about \$2,500 with \$870 in stock and \$400 in book accounts.

Morrison & Dagnall, plumbers' and builders' supplies, Montreal, have registered. The members of the firm are Robert Morrison and Josiah Woodward Dagnall.

Practically all the plumbing; steam-fitting and wiring has been completed in the new Murphy block, Fort William, and the plumbers have cleared out to make room for the finishers.

Alex. Closs, lately employed with Taylor Bros., Limited, Almonte, has been engaged as foreman of the tinsmithing and plumbing department of their business at Lanark.

In the mercantile hockey league, Saskatoon, the wholesalers whitewashed the tinsmiths, the score being 13-0. There were serious leakages in the defence of the tinner and they likewise failed to nail down their checks.

Walter N. Wyman, plumber, who has been employed in Weymouth for the past two weeks, returned home yesterday accompanied by his helper, Mr. Leslie Ruggles, who went to Weymouth last Saturday.—Digby (N.S.) Courier.

Rodgers, Gibson & Co. have secured the contract for the heating and plumbing in the new House of Refuge for Wentworth County, Ontario.

Business Changes Hands.

The tinsmith and plumbing business owned by Geo. Wolcott, Cork Street,

SEND IN THE NEWS.

News pertaining to the trade will be gladly used in the columns of Plumber and Steamfitter. If you know of something that would interest brother plumbers in other parts of the country, send it along. Personal items and association notes are not difficult to obtain; drop us a line when you hear something worth while. Photographs of stores, plumbers' meetings or illustrations of trade problems would also help to give our news columns an added interest.

Guelph, has been taken over by A. J. Frank, who has been in the business with Mr. Wolcott for some years.

Joins Association.

James Smith, 223 James St., Winnipeg, is among the new active members of the American Society of Inspectors of Plumbing.

To Appoint Inspector.

St. Thomas has decided to appoint a salaried plumbing inspector to see that all plumbing work and sewer construction is properly done. The experience of the city in sewer construction has led to the change being made.

More Business Blocks.

A note received from South Vancouver reads: Opposite South Hill school more business premises are being opened. A city plumbing firm has opened up a branch in a block of two stores completed last week.

To Make Fittings.

It is reported that the Otterville Manufacturing Co., Otterville, Ont., have installed at considerable expense an up-to-date plant for the manufacture of steam fittings. They are contemplating an enlargement of their premises in the not distant future.

Are Very Busy.

Bernhardt & Gies, Preston, have completed a large contract in Listowel and Louis Gies, who had charge, has returned. They are very busy at present in

the plumbing and steamfitting department and have added a new man in the person of Fred Kress, of Waterloo.

To Build Factory.

The ratepayers of Windsor voted in favor of granting certain privileges to the Canadian Winkley Co., Detroit, Mich. The company has bought a site in the west end of the place and will erect a factory this year.

New Members Secured.

The Toronto Master Plumbers' Association at their last meeting showed an increase of five in the membership. More members are to be added to the roll at the next meeting and the association seems to be enjoying a most healthy growth. The ball held during the past week is helping along matters in this respect.

Held a Carousal.

At the Supreme Heating Co.'s plant, Welland, on Saturday night a number of windows were broken and a gang got inside with two kegs of beer and roasted some chickens and had a high old time. Even some shooting was included in the programme. One summons has been served and a number of others will be issued in a day or two.

Tenders Accepted.

The Ottawa Waterworks Committee have accepted the following tenders for supplies:—Cast iron pipes, A. W. Fleck, representing the Canada Iron Company, Limited, \$11,583.40; special pipe castings, the Canada Iron Company, Limited, \$2.70 per cwt.; hydrants, Chaudiere Machine Company, \$38.50 each; oils and grease, Capital Warehouse Company, \$390.50; valves, Chaudiere Machine Company, \$1,148.15; lead pipe, McKinley and Northwood, \$1,801.10; brass, Robert Mitchell & Company, Montreal, \$1,915.50.

"Mahoney Night."

Something new in the way of Masonic ritual was introduced at Guelph Lodge recently, when Mahoney night was celebrated. Bro. Richard Mahoney, sr., occupied the worshipful master's chair and the other chairs were occupied by his sons, all of whom are Masons. Two of the sons, Harry and Dick, are plumbers

and the rest of the family are more or less in the building line, one being an architect and one a builder. During the evening, a large framed picture of Mr. Mahoney and his sons was presented to Guelph Lodge.

Business Sold Out.

Messrs. Bright & Son, Brampton, Ont., have sold out their hardware and plumbing business. Mr. C. E. Bright will shortly open up a shop in the same town and confine himself to plumbing and steamfitting only.

Improvements in Hospital.

Victoria Hospital at Renfrew has been altered and improved recently. Commenting on the changes in the plumbing, the Journal says:—The improved plumbing system installed is something long needed at the hospital, and from a sanitary viewpoint the building is 100 per cent. improved by this change. The installing of the new system was in the very competent hands of Mr. John Conley, and a specially good job has been made. All the plumbing is now open plumbing of the most modern and sanitary design. All the old plumbing has been torn out, the bathrooms and closets changed to rooms having windows opening to the outdoors so that ventilation and pure air are possible as never before. In addition the three lavatories are splendidly equipped with new and up-to-date fixtures, and everything done to make it possible to have bathrooms, etc., in proper hospital condition. The fine new baths are splendid fixtures and completely adapted to the needs of the institution.

Complimentary Banquet Held

Toronto.—At the St. Charles Hotel, on Wednesday, Feb. 15, the members of Plumbers', Steam and Gasfitters' Union, No. 46, tendered a complimentary banquet to one of their members, J. W. Bruce. The occasion was signalized by the presentation to Mr. Bruce of a signet ring with the V. A. emblem engraved on it. Although taken by surprise, Mr. Bruce replied in fitting terms to the address which accompanied the gift.

An excellent dinner had been provided. As will be seen from the accompanying list, the menu had been designed particularly for members of the plumbing trade.

SOUP

Cream of Chicken and Steam Traps

FISH

Boiled Salmon, Red Lead Hollandaise

Sauce
Duchesse Potato
(WIPE) JOINT
Roast Spring Turkey, Gas Cement
Cranberry Sauce
VEGETABLES
Smashed Fittings Potatoes
Green Peas with Solder
ENTREMENT
Steamed Overall Fruit Pudding, Wine
and Gasoline Sauce
Neapolitaine Ice Cream in Ferrules
Assorted Asbestos Cakes

Oakham Celery Cheese with Sand Holes
Biscuits a la Rubber Assorted Fruits
in Tool Bags

Smoke Test Coffee

The toast list was not lengthy but some capable speeches were heard. The toasts were "The King," "Our City," "United Association," "Our Guests," "The Ladies" and "The Press."

Among the guests in attendance were Ald. Maguire, Supervising Inspector W. H. Meadows, A. L. MacDonald, C. J. Doughty and Mr. White.

OUR VISITORS.



Arthur Gardner hails from the city of Montreal, where he ranks as one of the most progressive of master plumbers. He is not only a plumber but a business man; in fact, he is more business man than plumber, because he never learned his trade in the way that most plumbers do. He specializes on the management of the business and, as he radiates prosperity wherever he goes, it is presumed that he finds that method of doing things profitable.

It becomes, therefore, hardly necessary to state that Arthur Gardner is a strong advocate of strict business methods in the conduction of plumbing concerns. He is a stickler for system and a "corker" on account collections. He never gives up an account in despair and the most tardy of debtors

must in time succumb to his persistent efforts. Price cutting is strongly condemned by Mr. Gardner who sees in it a sure method of business suicide. "Would there were more like him."

Mr. Gardner called in at the office of Plumber and Steamfitter recently on his way to Wabash, where he was to officiate as one of the judges at the contest conducted by the Honeywell Co. Our artist depicts him in the act of weighing two essays, with the degree of critical analysis, which a keen business man would be expected to exercise in that situation. That he was able to accurately determine the relative merits of all matter submitted to him, is certain because he has, in addition to the practical knowledge, a good idea of the literary essentials.

An Estimate Sheet Was Adopted

Hardwaremen Approve Report on this Subject Introduced at Annual Convention of Association.

Peterboro.—at the annual convention of the Ontario Retail Hardware and Stove Dealers' Association held here last week, the question of a plumbing estimate sheet was dealt with.

C. A. Conn, of Tillsonburg, introduced the report of the committee on Lien Notes and Plumbing Forms, which read as follows:

"On the 26th of January a meeting of your committee was held at Stratford, and after a lengthy discussion, drafted out the following

ESTIMATE ON PLUMBING

For M

Bath		
N. P. Comb. W. and O		
" Supplies		
" Double bath cocks		
Lavatory		
N. P. Trap		
" Supplies		
" Cocks		
Plug, chain and stay		
Closet (Complete)		
Lead bend 4 inch		
Brass thimble 4 inch		
Sinks		
Bibbs		
Brackets		
Trap		
Pumps		
Laundry Tubs		
Traps		
Bibbs		
Boiler		
Stand		
Couplings		
Bibbs		
Soil Pipe 2 inch		
" 4 inch		
Y's		
T's		
Offsets		
Bends		
Hubs		
Traps		
Vent caps		
Sheet lead		
Iron Pipe 3/4 inch		
" 1/2 inch		
" 3/4 inch		
" 1 inch		
" 1 1/4 inch		
Pipe fittings		
Lead Pipe 1 inch		
" 1 1/4 inch		
" 1 1/2 inch		
" 2 inch		
Stop cocks		
Check valves		
Lawn service		
Oakum		
Gasoline		
Pig Lead		
Solder		
Sundries		
Freight and Cartage		
Labor		
Total Cost		
Profit		
Price Quoted \$		

forms to be used by all in the plumbing business. This form enables the dealer to estimate any plumbing job in a few minutes after he has taken off the necessary measurements, without any possibility of forgetting to figure in some article or other which is necessary to the job. We recom-

mend that our secretary have a number of these forms printed and sold to the dealers in lots of 100 or more." Signed by J. R. Myers, S. L. Adolph, Chas. A. Conn.

Mr. Conn amplified the report somewhat, pointing out that hardwaremen who did plumbing work would find it convenient to estimate the cost of work this way. The slips could then be filed away for future reference and would save them much time in figuring on contracts of a similar nature afterward. Somewhat similar sheets, he declared, had been used by members of the committee very successfully.

The report was adopted.

Plumbing By-law Not Enforced

Ottawa.—The laxity of the health department of this city, in not enforcing the plumbing by-law, has stirred up quite an agitation. Strong demands are being made for proper enforcement and the movement is supported by none more warmly than the master plumbers. Many citizens claim that the by-law itself needs revising, but those in close touch with the situation consider that the by-law, as it stands, covers the ground pretty well.

The Citizen has gone to the length of interviewing a number of master plumbers on the question. That the present plumbing by-law is efficient was the unanimous opinion expressed. They agree that if it were enforced to the letter there would be no unsanitary houses in Ottawa. Some declared that there are many houses, or more properly speaking shacks, in certain sections of the city, which are not worth installing plumbing in. The suggestion was made that these places should be condemned and placarded, while others which were worth spending money on should be fitted with plumbing without delay in accordance with the provisions of the law.

That these landlords are allowed by the health department to evade the law with impunity, seriously menacing the public health, was the emphatic declaration of several of those interviewed on the subject.

A Good By-law.

"The plumbing by-law is as good as you can get," said J. R. McLennan. "About a year ago an effort was made to compel all landlords who had houses

without plumbing to put closets in. The inspector made a house to house visitation but he found that many of the places contained only two or three rooms and there was absolutely no place to put a closet with a window as required, so the matter fizzled out."

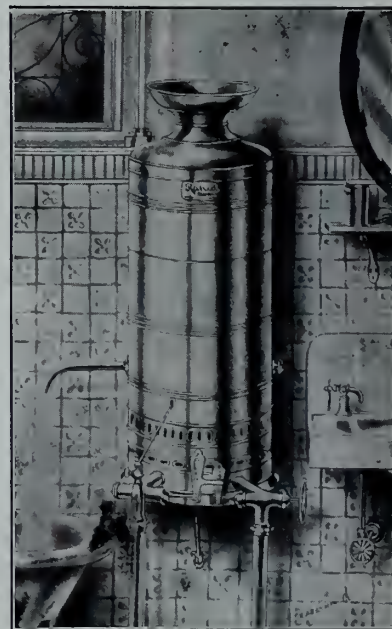
Plumber on Board.

H. L. Chandler, of Chandler & Co., expressed the opinion that there should be a master plumber on the board of health. A man with practical knowledge of conditions was needed there, in his opinion.

James Livock, of Currie & Livock, asserted that there was nothing wrong with the by-law. It was as good as could be devised but it should be enforced.

RAPID BATH HEATER.

The Rapid Heater Co., Grand Rapids, Mich., furnish an instantaneous heater which possesses the quality of supplying hot water in any quantity at a moment's notice. It is comparatively simple in its construction and is made either with or without a vent pipe. It is absolutely safe and, when shut off, all expense for maintaining and running ends instantly. It is capable of heating three gallons of water per minute, rais-



ing the temperature 50 to 65 degrees (according to quality of gas used) and is equipped with self-cleaning sprayer, water and gas valves complete as well as a shelf and bracket. It is 31 inches in height, with a diameter of 12 inches and weighs 40 pounds.

It is made in four models, the accompanying illustration being of model C, which can be used satisfactorily upon artificial or manufactured coal or water gas without the use of a vent pipe.

New Buildings, Water and Sewerage Systems

Opportunities Offered by Municipalities and Private Enterprise for New Plumbing, Heating, Ventilating or Sanitary Systems—Work Being Undertaken in Every Section of the Dominion.

Municipal Undertakings.

Carleton Place, Ont., is considering the installation of waterworks system.

Prince Rupert will undertake work on the sewerage system this year to cost approximately \$200,000.

Moose Jaw is considering plans for an extension of the sewer and water systems to serve South Hill.

The council of Nelson, B.C., have decided to spend about \$5,200 in the extension of sewers, work to commence immediately.

The ratepayers of Victoria, B.C., will be called upon to vote on a by-law to authorize the expenditure of \$250,000 on a new sewer system.

The construction of sewers on Elizabeth, Elias and Dean Streets, London, have been recommended by the board of health and city engineer.

By-laws will be submitted to the Calgary ratepayers for approval shortly to authorize the expenditure of \$245,000 on waterworks extensions; \$40,000 on sewer connections. By-laws are also being prepared for a large trunk sewer and for lateral extensions to cost about \$500,000.

Public Buildings.

The proposed new armory at Barrie will cost \$15,000.

A new four-room school is to be built at Chippawa, Ont.

A hospital at La Tuque, Que., is under consideration.

The Orillia Y.M.C.A. is to be enlarged at a cost of \$10,000.

Galt, Ont., is considering a \$30,000 addition to the hospital.

Plans are to be prepared for a new city hall at Edmonton.

Berlin, Ont., will build a new wing to the Berlin-Waterloo hospital.

The Mutchmor Street school, Ottawa, is to be enlarged at a cost of about \$50,000.

The convent of St. Joseph, was destroyed by fire at an estimated loss of \$80,000.

Galt is to begin a campaign for funds to provide larger quarters for the Y.M.C.A.

A new land and irrigation department building is to be erected at Calgary at a cost of \$75,000.

New armories are to be erected at Brantford, probably on the Buck property, Brant Ave.

The General Hospital Board, Orillia, have under consideration the enlargement of the building.

A government building is to be erected at Harriston, Ont. Tenders will be received until March 13.

The congregation of St. Andrew's Presbyterian Church, Moose Jaw, have decided to build a new church.

The Lutheran Church for Western Canada have decided that the Lutheran college is to be located at Melville, Sask.

The recently erected Mountain View Methodist Church, at Vancouver, was destroyed by fire at a loss of \$20,000.

The First Congregational Church, Ottawa, will call for plans shortly for their new church at the corner of Florence and Kent streets.

The sum of \$150,000 is to be expended on the enlargement of the legislative wing of the provincial government building at Victoria, B.C.

Brandon is to build a new school in the east ward to cost \$35,000; a new normal school, \$50,000; and a fire hall to take the place of the one on Seventh Street, \$25,000.

The plans for the new University school, at Victoria, B.C., will be ready in about a week, it is stated. They call for an immediate expenditure of about \$100,000, and later on of about \$500,000.

The order of Oblates of Mary Immaculate have secured a building site at Kitsilano, B.C., for a building to be used as a parish hall, school and church, plans for which will be prepared at once.

General Buildings.

A company to manufacture rubber goods is locating at Barrie, Ont.

P. W. Gardiner & Son will erect two new additions to their planing mill at Galt, Ont.

J. McFarlane, Ottawa, is having plans prepared for a large apartment house on Lisgar Street.

A. Mowat is to build a 3-storey building at Regina, construction to start in the spring.

A building owned by A. Laurette, Farnham, Que., was destroyed by fire at a loss of \$18,000.

The site is being prepared for the new building of the Royal Loan and Brantford Co., Brantford.

Colonel Jas. Walker intends building a \$100,000 block on his Seventh Avenue property, Edmonton.

Plans are ready for the new manse for St. Paul's Presbyterian Church, Brandon. It will cost \$8,000.

A two-storey brick block is to be built by Arthur E. Haynes on Fort Street, Victoria, B.C., at a cost of \$25,000.

The Canadian General Electric Co. are considering the construction of a lamp factory at Peterboro to cost about \$250,000.

Plans have been prepared for an eight-storey apartment building on Melville Street, at a cost of approximately \$225,000.

The McNair Fruit Co. will commence shortly the erection of a large new building on Ninth Ave., Calgary, to cost about \$40,000.

The plant of the Jervis Inlet Lumber Co., near the mouth of the Fraser river was destroyed by fire, causing a loss of about \$20,000.

The Union Bank is to build a business block at Carleton Place. The plans call for a two-storey structure of brick with Roman stone front.

The cost of the proposed office building for the Dominion Trust, at Victoria, B.C., is estimated at about \$135,000. Work will start in about four weeks.

Building permits have been issued at Edmonton, as follows: Johnson and Maxter, First st., rooming house, \$1,000; A. Rendall, 3 two-storey frame dwellings, Peace Avenue, each \$3,200.

Permits issued recently at Winnipeg include: E. Noe, 2 houses on the north side of Stella, \$6,000; Johnson & Bjornson, dwelling, on the east side of Alvestone, \$2,600; Kristjanson & Bjornson, dwelling on the east side of Alvestone, \$3,000.

John McFarlane, Ottawa, will make extensive alterations to his store on Bank Street; W. J. Spratt is erecting a commercial building on the corner of Bank and Glen Avenue. It will be a large brick building with stone front; W. J. Spratt has begun the excavations for the branch building for the Bank of Ottawa, in Ottawa South.

THE ROBERTSON CO. TO BUILD IN TORONTO.

The Jas. Robertson Co. are arranging to erect a new building in Toronto this year. Their present headquarters adjoin Government House on King street west and, as all this property has been bought out by the C. P. R., the Robertson Co., must seek another location.

It is announced that a site has been bought at the corner of Spadina avenue and Sullivan, for the offices and plumbing showrooms of the company. Plans are now in course of preparation for the new building and work will be started just as soon as the weather permits. The company have until May, 1912 to vacate their present premises but are hoping to be able to move into the new building long before that time.

It is understood that the paint factory will be erected on a different site.

PLUMBING AND HEATING MARKETS

SUMMARY OF MARKET.

The predicted reduction in the price of enamelware has come into effect. There is also a lower tendency in some lines of soil pipe and iron fittings. Solder is stronger, as a result of the unusual firmness of tin.

MONTREAL.

Montreal, Feb. 27. There has been a good general demand for general plumbing lines, especially for this time of the year. There is apparently considerable work being carried on not only in the city but generally as orders have been coming in fairly well. When satisfactory reports are received it is safe to judge general conditions as being in a healthy condition. There have been no particular changes of import to the trade. One or two have been anticipated but as yet nothing has been announced for the Canadian trade.

In the metal market the situation has not materially changed. Prices are just the same as when last referred to. The market conditions have undergone slight changes but to all purposes they are about the same. Tin is difficult to describe on account of its many fluctuations. It is firmer now, however, although it is difficult to tell how long it will remain in that position. Copper and lead are easier and so is spelter. The markets are generally quiet with a fair demand passing.

Soil Pipe.—There is a better demand for soil pipe and a fair amount of business is passing. Discounts for medium and heavy are 70 and 10 per cent.

Lead Pipe.—Conditions have improved to some extent and what is considered the opening of a good season is believed to be not far away. Demand is encouraging and suggests a certain amount of work under way. Prices are: pipe and waste, 9 cts. per lb.; calking lead $4\frac{1}{2}$ c.; traps and bends, 50 cts.

Solder.—This market is holding its own with a normal demand and prices holding firmly. The strength of tin enhances the value of solder and lends to the strength of the market.

Iron Pipe.—Like soil and lead pipe there is not a great deal of business in iron pipe at this season, still there is an improvement that is noticeable and should be more apparent when the season really gets under way.

Quotations are: $\frac{1}{4}$ -in. black, 63; galvanized, 48; $\frac{3}{8}$ -in. black, 59; galvanized, 44; $\frac{1}{2}$ -in. black, 69; galvanized, 59.

Radiators and Boilers.—There is considerable improvement in the demand for heating necessities and the demand for

radiators and boilers is fairly good just now showing that a certain amount of activity is passing. Quotations are 60 and 5; round hot water boilers 50 and 10; hot water radiators, 50 and $7\frac{1}{2}$; steam radiators, 50 and $7\frac{1}{2}$ and $2\frac{1}{2}$.

Metals.—There is nothing special to say about the metals. Dealers announce a fair business but for the present it is rather quiet. The feeling in lead spelter and copper is slightly easier but tin has regained its position except that the market fluctuates considerably.

TORONTO.

Toronto, Feb. 27.—Conditions are becoming much brisker, the past week having shown a greater degree of activity than has prevailed for some time. The supply houses report that the prospects are for an early opening of the spring work and the rush is expected to start at any time now.

The market has been featured by numerous price changes. The predicted decrease in enamelware has been put into effect, the price of tubs having been lowered \$1. Soil pipe has also seen a decrease in price in some lines. In contradistinction, solder has shown a tendency to firm up and higher prices are again prevailing. Some lines of iron pipe and fittings are selling at a lower figure. The market, in fact, has had a general tendency downward during the past week.

Enamelware.—The reductions which have been made recently in the United States have caused a corresponding decrease on this side of the border. The price of tubs has been reduced \$1 all around. Tubs, 4 foot 6 and 5 foot, are now quoted at \$14.50 and 5 foot 6 tubs at \$16.50. There has been an increase in some lines of lavatories, ranging about 10 per cent. Sinks stay at the old price, however. The demand is showing signs of picking up. "Not too soon," is the comment heard in the supply houses, where business has been somewhat dull of late.

Boilers and Radiators.—There is still considerable work being done in the heating line and orders are being placed for boilers and radiators. There is more activity apparent than in plumbing work, owing to the open weather, which has prevailed.

Soil Pipe.—There is not much demand yet but some changes have been made in prices. Medium and heavy now sell at 75 and fittings stand at the same figure; a reduction of about 2 per cent. The discount on 7 and 8 inch sizes remains the same, 50 per cent.

Lead Pipe.—There is but a small demand yet. Lead waste sells at 9c per

lb. and calking lead at $4\frac{1}{2}$ per lb. Traps and bends are quoted at 50 per cent.

Solder.—As tin continues to range upward in price, solder has been selling at a slightly higher figure than at last time of issue. Solder has become unusually high, in fact. Until the price of tin gets back to the normal, no downward change is to be anticipated in solder. Half-and-half is quoted to-day at $26\frac{1}{2}$ c and wiping is selling at 22 cents. The latter price is an advance of 2c to 3c over the last quotation. There is an increasing demand.

Iron Pipe and Fittings.—Better discounts are announced in several lines. Cast iron fittings are quoted at 65 to 70. Malleable fittings stand at $37\frac{1}{2}$ to 40 per cent. Other quotations are: cast iron bushings, 70; malleable, $67\frac{1}{2}$; nipples, 75 and 10; headers, 60 and 10; flanged unions, 70; malleable-lipped unions, 65 per cent.; galvanized pipe, \$6.18; black pipe, 1-inch size, \$4.54.

Metals.—No change has come over the local market this week, either in price or condition. The active tone reported a week ago is maintained. Lead and spelter are strong and tin holds its high place. No one metal, however, is much to the front. Tin is active, in the face of very light stocks. The price remains at 47 cents, and the market is strong at that figure. There have been few fluctuations during the week, and the feeling has been much steadier during the past few days. With the metal in control of the syndicate, it may be taken as pretty certain that the price will not fall very low.

DRUMS ABOLISHED.

The rules and regulations governing plumbing in the city of Albany, N. Y., formerly permitted the use of one trap to a sink and wash-tray in cases where these fixtures immediately adjoined each other, and it was common practice to install a drum or jar-trap. This rule has been amended by the Bureau of Health, and it is now provided that every water-closet, urinal, sink, basin, wash-tray, bath and every tub, or set of tubs, and every hydrant, waste-pipe and every plumbing fixture of every description must be separately and effectively trapped as may be directed by the chief inspector of plumbing and to his satisfaction.

Traps must be placed as near the fixtures as practical and in no cases shall a trap be more than two feet from the fixture which it traps. It will not be lawful hereafter to install the trap known to the trade as the drum, or jar-trap. The amendment takes effect March 15, 1911.

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Modern Sanitary Plumbing Steam and Hot Water Heating, by J. J. Lawler.....	4 00
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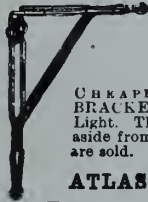


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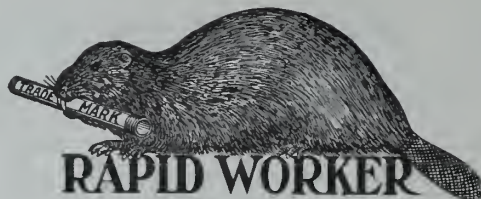
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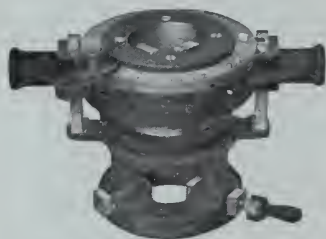


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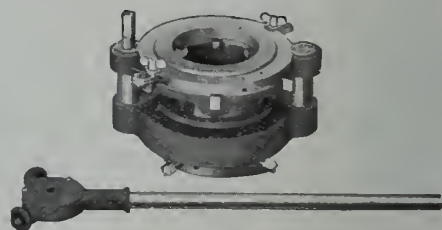
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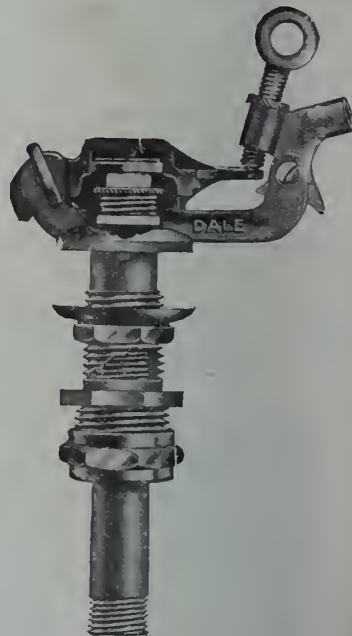
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This should interest most every plumber or lighting contractor. Catalogue is mailed upon request.



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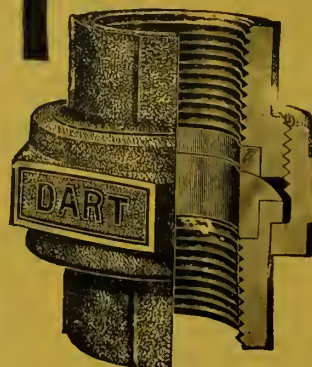
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Vol. V.

Publication Office : TORONTO, MARCH 15, 1911.

No. 6

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PORCELAIN ENAMELED
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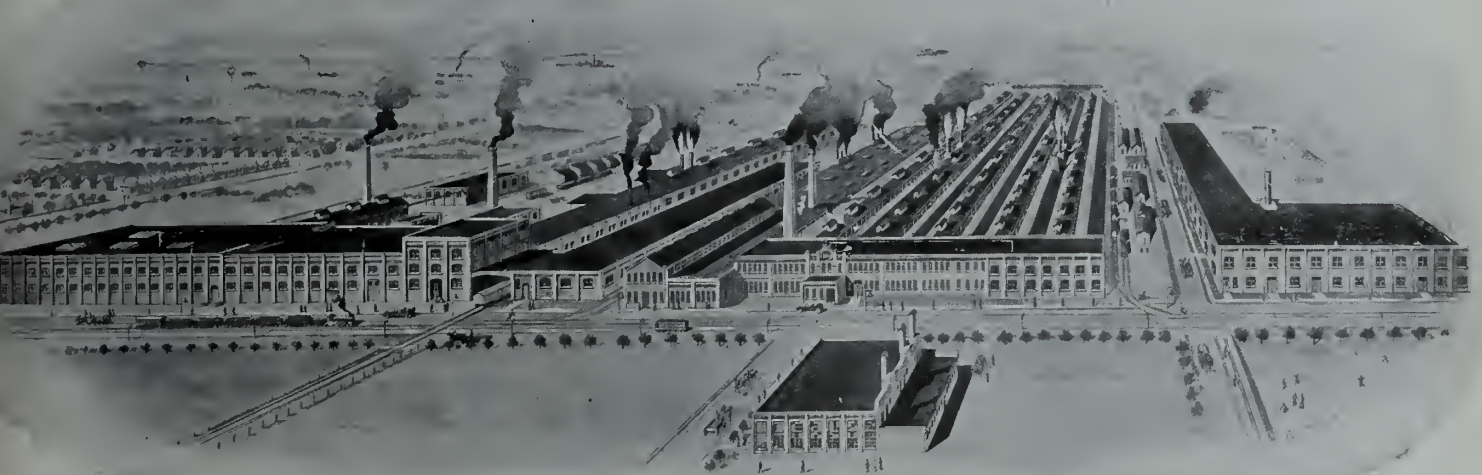
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I want you to try it.

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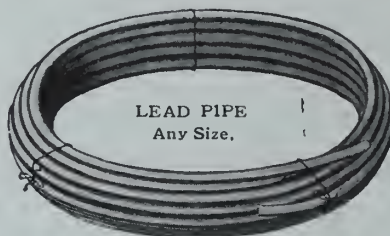
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TIDINGS IN MINE EARS.

GIVE TO A GRACIOUS MESSAGE
A HOST OF TONGUES.
Antony and Cleopatra



LEAD PIPE
Any Size.

WRITE YOUR REQUIREMENTS.

OUR PRICES AND GUARANTEE
WILL DO THE REST

The Canada Metal Co., Limited, Toronto

CAST IRON FITTINGS

Being manufacturers of Cast Iron Fittings exclusively, we are naturally in a position to give quality the first place, which accounts for the high standard maintained.



That our fittings are being recognized by the trade as a standard is proven by our largely increased sales which have made the installation of additional machinery necessary.

Standard Fitting & Valve Co., Ltd. - Guelph, Ont.

Try a business card in
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IT WILL PAY YOU

to watch our Condensed Ad. columns. There are many money-making positions there. You may find just what you want.

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It will pay you in future business and actual profit to install "Rapids." For perfect results, simplicity, economy and durability the "Rapid" stands second to none. Every Heater is absolutely guaranteed—it must make good or we will.

VENT or NON-VENT

Two types---both proven satisfactory by many years of use. 1911 finds many improvements in the "Rapid" line, among which is the bringing out of a new model that will be a winner for the Canadian trade.

IF YOUR JOBBER CANNOT SUPPLY YOU, WRITE DIRECT TO

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Pertaining to Heating, Lighting, Plumbing and Ventilation. All Orders Payable in Advance.

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External Plumbing Work. By J. W. Hart	3 00	Repair Kinks. By Martin L. Kaiser	50	Kitchen Boiler Connections	1 00
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TECHNICAL BOOK DEPARTMENT

MacLean Publishing Co., 143-149 University Ave., Toronto

Investigate

our Claims!

YEARS of experience, specialized knowledge, and the greatest skill and care in selection of materials and in workmanship and finish have enabled us to produce the

“KING” BOILER

which we pronounce without hesitation to have no Superior anywhere.

Will you investigate for yourself the merits of the “King” Boiler? Get convinced that the



special design of the “King” Combustion Chambers and Waterways **do** give maximum heat from minimum fuel consumption. See how our new shaking apparatus effectively clears bars of ashes, without shaking down the coal. Note the many other features and good appearance of the “King” and then decide that you cannot afford to handle and recommend any other boiler.

As regards the

“KING” RADIATOR

for many years a favorite throughout the Dominion, we submit it to severe tests before shipment, so that the chance of leakage or breakage is practically eliminated.

They are made in all heights and widths, making them adaptable to any space, and in two patterns only, plain and ornamental, so that matching is made easy.

Stocks of both “King” Boilers and Radiators now on hand, and prompt delivery guaranteed.



We carry a complete assortment of Steamfitters' Supplies, including Lunkenheim Valves

Write for details.

Steel and
FRASER AVENUE,

TORONTO SHOWROOMS:
80 ADELAIDE STREET EAST

Radiation, Ltd.
TORONTO

MONTREAL SHOW ROOMS AND
SALES OFFICE: 138 CRAIG ST. WEST
AGENCIES IN ALL THE LEADING CITIES

Plumber and Steamfitter

and Sanitary Engineer of Canada

Published on the 1st and 15th of
each month by
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Circulating amongst Plumbers,
Steam, Hot Water and Gas Fit-
ters, Sanitary Inspectors, Heating and
Ventilating Engineers, City Engineers,
Boards of Health, Architects, etc.

TORONTO, MARCH 15, 1911

A PUBLIC HEALTH EXHIBIT.

Further arrangements have been completed by Dr. McCullough, Ontario provincial health officer, for a public health exhibit at the Canadian National Exhibition in Toronto. The exhibit will consist of public health equipment of every kind and will include a varied assortment of apparatus and instruments relating to the prevention of disease. A lecture room is being provided where lectures and demonstrations will be given daily. Dr. McCullough states that the lectures will be strictly limited in length but the subjects taken up will be of vital interest. The use of a reflectoscope will enhance the interest for the public.

The idea is a splendid one and much good will undoubtedly result. From the standpoint of the plumber, a good opportunity is presented of showing the value of proper plumbing. Good plumbing means proper sanitation; lack of sanitary arrangements and appliances spells disease. Well presented in the form of lectures and exhibits, these facts would undoubtedly strike home to numberless visitors at the "Fair."

BONDS NOT REQUIRED.

The situation in Ottawa with respect to health matters is typical of the condition of affairs existing in many cities. Ottawa is not the only place where the enforcement of health regulations has been lax and it would not be amiss for health boards in all sections of the country to investigate into conditions in their territory. It would be found, in a large percentage of cases, that there was scope for more strict adherence to many clauses.

The civic authorities in the capital city are now taking measures to remedy a number of defects in the plumbing by-law. Galvanized iron pipe will be used in fireproof buildings instead of lead; outside closets will be strictly banned; and it is suggested that plumbers take out their license at the office of the health officer instead of at the police station as formerly.

In discussing the latter clause, the health officer stated that, in his opinion, plumbers should be required to give a bond for the satisfactory performance of work. As the city has a plumbing inspection system, it is hard to see what reason there could be for so radical a demand on the members of the trade. When work must be done to the satisfaction of the inspector, on pain of doing it over at the plumber's own expense, the latter is bound to do his level best and the placing of so unfair a condition is entirely unwarranted. The inspector is supposed

to see that the work is satisfactory; what more could be desired?

THE INEVITABLE CONSEQUENCES.

An instance is cited on another page where a plumber bid \$91 on a contract, the material for which would cost him \$95 at the lowest figuring. For some reason or other—certainly not the highness of the price—the job was never let. The fact that this same master plumber is now out of business can, however, be accepted as bona fide evidence that some contracts were let on which he had figured with a like amount of business-like precision and acumen.

This instance is worth the attention of every reckless price-cutter. It tells convincingly of the fate that awaits the eager bidder after contracts, who figures regardless of common sense and his own best interests.

WATCH COLLECTIONS CLOSELY.

The writer called on a master plumber the other day and found him poring over a bundle of accounts. They dated back to the first of the year and only a percentage, a very small percentage, were marked "paid." The amount in arrears ran up to several thousand dollars and he was shaking his head rather concernedly at the largeness of the total. "What will you do about it?" he was asked. "I intend to start right out and get after these accounts myself," he replied. "I shall do practically nothing else until the bulk of them are wiped off the list. I never let accounts slide for any length of time." He further explained that his custom in the past had been to devote a certain length of time at regular intervals to the task of collecting. After he had done his best—and it was a pretty good best—the incorrigibles would be handed over to a collecting agency, but not before. In this way he kept his books pretty clear. It meant a tremendous amount of work for himself but, as he explained, it was well worth it.

No plumber, who desires to remain in business and prosper, can afford to neglect this very necessary feature of the work. Neglect it for a time and the accounts will soon start to pile up to alarming proportions. Let them continue to accumulate and they will soon swamp the business. The work of collection is not the most pleasant imaginable. It entails a deal of disagreeable solicitation and occasional rebuffs. But it is one of the most essentially necessary features of a modern business and as such cannot be neglected.

MOVEMENT IS UNDER WAY.

The officers of the National Association are waging an active campaign to instill into members of the trade in all parts of the Dominion a deeper and more lasting interest in association work. In their efforts, they deserve the heartiest support of master plumbers generally.

Secretary LeGrow is sending out batches of letters almost daily urging the recipients to greater and more continuous efforts. Particular stress is laid on the need for provincial organization, for, until the provinces have active association, the growth of the national will necessarily be limited. He reports that things will start to move in a few weeks now. When the movement once gets nicely under way, it will rapidly grow to such proportions that a permanent series of provincial associations will be firmly established.

In the meantime, united effort is required. The duty which devolves on each provincial vice-president should be partly borne by members of the trade in that province. No one man can carry on a campaign so wide in its scope single-handed and the success of the movement depends then on individual effort. It should be, and doubtless will be, freely accorded.

ADVOCATING DAY CLASSES.

Practical instruction in plumbing work is recognized in the old country to be a great benefit; so much so, in fact, that many master plumbers are advocating the holding of day classes for apprentices. This may seem a very radical proposal but it has been advanced by progressive and far-sighted men, who believe that it would pay them to sacrifice on the time of apprentices to the extent of two days a week, in order to secure returns in the shape of more efficient help later. The proposition was favorably discussed recently at the annual dinner of the Huddersfield Association and, although nothing definite may result, it shows clearly how firmly the master plumbers in the Mother Country are convinced of the benefit of technical instruction.

At the Huddersfield dinner, a number of other important matters were taken up. It was stated, for instance, that sooner or later the plumbers would have to take up the electrical trade. The same applies in this country and there is already a marked tendency on the part of plumbers to go into the lighting line.

INDIVIDUAL TRADE-MARKS PROPOSED.

As an evidence of the advances being made in the standard set for plumbing work, the proposal has been made in England that registered plumbers have a trade-mark. The question was discussed at a recent meeting of the National Registration of Plumbers for Hampshire, Dorset and the Isle of Wight. One member referred to the proposal in a highly approving way. The issuing of a trade-mark for registered plumbers would make it possible to affix the registered number of the workman, together with the date of the work. It was thought that this would serve as an additional inducement for the plumber to put in his very best work. It was pointed out that this would entail a cost of probably 1 per cent, but the belief was expressed that the public would gladly pay this.

The idea contains some points which go to recommend it. Undoubtedly a better grade of work would be done if all work were indelibly stamped with the name of the contracting firm.

POINTED EDITORIALS.

It requires very little more effort to keep an attractive shop window than an untidy one. Isn't it worth it?

* * *

If apprentices in England are allowed two days every week to attend classes, there will be a rush of boys to the old country.

* * *

The Honeywell Heating Specialty Co., Wabash, have sent out very handsome watch fobs, one of which has been received at the office of Plumber and Steamfitter. It is an attractive souvenir and is gratefully acknowledged.

* * *

At the Peterboro hardware convention, one of the topics discussed was whether a tinshop in a small place could be made to pay, when it was necessary to hire a man at a good salary. It is certain, for one thing, that it will not pay if a man is hired to run it at a poor salary. A small pay man does his work in accordance with the salary paid.

* * *

It was with feelings of deepest regret that plumbers in all parts of the country heard of the death of Robert Ross, of Toronto. Few master plumbers were so widely known and so universally liked and respected. Robert Ross was representative of the best class of men in the trade—honest, practical, a good business man and a believer in friendly co-operation. An enemy of bitter competition, he did much to establish and further plumbing associations.

* * *

Capital suggestions are made by J. F. Brady in this issue for the establishment of a ready reference catalogue for plumbers. Any of the methods suggested would serve to supply the plumber with a means of rapidly securing any information desired. As matters stand now, most plumbers lose a lot of time hunting through old catalogues and trade papers seeking for certain ads. or articles, or to learn the price of some particular thing. If Mr. Brady's suggestions were followed out, this would be, to a large extent, eliminated.

* * *

Commenting on the statements of J. P. Cox, of Hull, England, relative to the near advent of the perfect plumber, a writer in the Ironmonger breaks into verse, in the following wise:

Oh Plumber, plumbing where the mouse
Abides, and scaly beetles dwell,
Thou art the Angel of the House;
When thou art with us all is well.

The ball-cock, in hydraulic bliss
Floats peaceful on the cistern's brow;
It doth not stick, nor squirt, nor hiss,
Because it knows thou mad'st it—thou!

When the Perfect Plumber arrives on the scene—and his advent is not an impossibility despite the general tendency to decry the suggestion of perfection in anything human—his arrival will have been hastened by the operation of plumbing technical classes.

Advertising Now Will Help to Get Business Later

At This Season of the Year the Master Plumber Should Strive to Get in Touch With Owners and Builders of New Houses—Advertising Pays Well—Some Criticisms of Plumbers' Ads.

The busy season of the year for the plumber is not far off now. March came in, according to general weather reports, like a lion; unless tradition has sadly deceived us, then, it will go out quite lamblike. An early spring means an early start for building operations.

There is every reason to believe that 1911 will be a record year in point of building statistics. Prospects in all parts of the country are reported to be exceptionally good. Buildings on a large scale have been planned; cities are growing and the urgency of the question of accommodation necessitates the erection

of a greater number of dwellings; factories are showing evidences of the prosperity of the nation by preparing to extend. New buildings mean work for the plumber and steamfitter, and it is, therefore, quite safe to assume that the trade has a brisk year ahead.

The progressive master plumber cannot afford to waste time at this juncture. He should be "up and doing." If he desires to get a good share of the contracts, he should lose no time in getting in touch with the owners, architects and builders of projected structures. One of the most effective measures of getting the ear of the desired parties is by ad-

vertising. A telling ad. at this season of the year would help considerably in getting contracts a little later on.

Bayer & Co., Sydney, C.B., have a fairly good ad. in the group reproduced on the opposite page. The lay-out is excellent and the reading sets out the scope of Bayer & Co.'s business in fairly good style. The ad. would have been improved, however, if the space had been devoted to heating work entirely. There is room for a good straight talk along that line, with a prominent heading, such as "Heating Work Done." By concentrating on the one line also, more point would have been lent to the illus-



Steam Heating.
Hot Water Heating.
Plumbing.
Repairs to Heating and Plumbing.
Gasoline Engines for Sale.
Estimates on all work cheerfully furnished.

BAYER & CO.

George Street Sydney

CARUFEL AND FROST
TINSMITHS & PLUMBERS

AGENTS FOR

FAMOUS-GURNEY STOVES
AND FURNACES
PUMPS A SPECIALITY

CORRUGATED METAL
GRAINERIES



PLUMBING

HOT WATER, STEAM
and HOT AIR HEATING

GALVANIZED IRON WORK, ROOFING
and EAVETROUGHING

We are continuing this part of our business at our new premises, corner of Simcoe and Bethune Streets.
Phone 88.

ESTIMATES GIVEN ON ALL CONTRACT WORK.

Adam Hall



When in need of a plumber try
GOODWIN & CO.

We are always very particular with our work and also anxious to please our customers both in workmanship and reasonable prices. A full line of plumbing goods, gas fixtures, etc., always on hand.

Repairing promptly attended to.

Goodwin & Co.

Tel. 332. 215 Christina St.

J. & A. FIDDES

PLUMBING

Steam and Hot Water Heating

Offices—Two doors east of Bank of Toronto,
Colborne St., Oakville.

Phone 4.

Let This Fact Impress
Itself Upon You

If you contemplate installing a system of Plumbing or Heating, or both, in your house or public building, if you want ABSOLUTE SATISFACTION you cannot do better than come to us. We make a specialty of these branches. Best of Workmanship, Best of Material, Best of Prices. Estimates Cheerfully Furnished.

REFERENCES
PLUMBING AND HEATING

Jas Sealy, Block
Wire & Pinco, Offices.
A. V. Pines, Residence
W. P. Shaffner, Residence
Percy Parker, Residence
G. F. Roy, Block
W. B. Middlemas, Residence
C. B. Lockhart, Residence
Kings County Jail, Kewville
T. P. Calkin, Residence
W. H. Townsend, Residence
Mrs. Charles Masters
F. E. Newcombe & Co. Block
E. B. Newcombe

REFERENCES
PLUMBING

Mrs. Henry Newcomb, Residence
Dexter Collins, Residence
E. J. Ward, Residence, Mrs. Rand
Calvin Bishop, Residence
A. E. Calkin, Residence Mt. Spinney
Church Workers, Residence. Mr. Wiltshire
Mrs. Geo. Lockhart, Residence
Albert McMahon, Residence
Capt. Wm. Mc Bride, Residence
John McKay, Residence
A. C. Johnston, Residence
H. H. Reid, Residence
Bert Hiltz, Residence.

W. Wylie Rockwell

Plumbing and Sheet Metal Works

P. O. Box 104 KENTVILLE Phone 74

GEORGE CALBECK

Next West the Dominion Natural Gas
Cos' Office, is prepared to install all
kinds of

HEATING AND PLUMBING

Apparatus, and do anything in the line of
TINSMITHING, PIPE FITTING AND REPAIRING

Repairs
Promptly
Attended to

GEORGE CALBECK

A Trial
Order
Solicited

Medicine Cures
Disease Kills
Sanitation Prevents
Correct Plumbing is
hand in glove with
Sanitation.
Your patronage solicited.

H. A. KNOX

ELGIN STREET

Plumbing Heating

Phone 691.

To Cure and to
Prevent Infection

Is a matter of grave concern. Your doubts about your house drainage will be removed by a smoke test.

We can serve you.

H. A. KNOX

ELGIN ST. PHONE 6-9-1

Plumbing Heating

Repairs

The Upkeep of
An Outfit

Talks like money. Our experience enables us to safely guide you in selecting and equipping a plumbing and heating outfit.

Ask for prices.

H. A. KNOX

ELGIN ST.

Phone 6-9-1.

Make "The Next
Call"

OVER PHONE 6-9-1
OR 4-1-0-9.

When troubled by any
kink or defect in your
Plumbing and Heating,

H. A. KNOX

ELGIN STREET.

PLUMBING HEATING.

Bath Room Furnishings.

tration. On the whole, however, it is a good ad.

Carufel & Frost, Strathecona, Alta., have used double-column space to poor advantage, inasmuch as mere mention of lines carried is given. The printer has made the impression still poorer by a faulty and careless arrangement. This ad. would have been improved vastly if it had been devoted to the stove end of the business entirely, and some facts given on the all-important question of price. As it stands, the cut might just as well have been left out.

George Calbeck, Dunnville, has a really admirable arrangement. A direct plea is made and a number of excellent points are included. One common fault is revealed—the name should not have been featured so prominently. Mention at the bottom of the ad. was quite sufficient, without usurping the full space at the top for that purpose as well. With a good strong statement of fact or an original “catch line” to head it off, this ad. would have been unusually commendable.

Adam Hall, Peterboro, has committed the serious fault of losing his one outstanding point in the body of the ad. Surely, the fact that he was moving to new premises was the point that required emphasis above all else. That Adam Hall engaged in plumbing, heating and tin work is probably very well known to residents of that locality, but his removal to a new stand is distinctly of the nature of news and should have been prominently displayed.

Goodwin & Co., Sarnia, have an ad. which strikes one as attractive at first glance, but which does not improve with closer acquaintance. The illustration is rather stilted, but it undoubtedly conveys the desired impression; that is, it brings the question of plumbing at once to the mind of the reader. The reading matter is fairly convincing, but it could have been rendered much more so by the substitution of a few facts as to price, in place of the generalities, which go to make up this statement.

J. & A. Fiddes, Oakville, use a good-sized space to poor advantage. The plumber has such a splendid opportunity to put forth convincing talks that it savors of waste to devote double-column space to a mere statement of the name of the firm, the lines covered and the location.

W. Wylie Rockwell, Kentville, N. S., has an ambitious ad., which undoubtedly deserved better treatment at the hands of the printer than was accorded. The arrangement of matter, though well conceived, has not been well carried out. The appearance would have been improved had the lists of references been boxed in. Still there is much to be said

in favor of the ad. The leading talk is forceful and the references are certain to carry great weight, particularly in a small place, where all of the names mentioned would be known to the readers.

To hark back to the question of arrangement. An improvement would have been effected if the leading talk had been spread across the top of the space with the phrase, “Let this fact impress itself upon you,” given prominence as the top line. The reference lists might then have been boxed in more compactly, one on each side, giving sufficient space for a little reading matter between.

H. A. Knox, Ottawa, demonstrates, in the series of single-column ads. shown, that he is an aggressive and discerning advertiser. Each ad. contains one

thought, and one only, but that thought is well developed and rendered effective. Mr. Knox believes in daily changes of copy, and is thus able to use his space for the exploitation in turn of all lines carried. The first ad. is one of the best. It is tersely written and carries out the central idea well. It might have been improved by putting the words “Sanitation prevents” in larger type or by using some other typographical device to throw that idea into bold relief. The use of several different faces of type by the printer has not improved the appearance.

The two central ads. would have been improved if the border used in the other two had been adopted. If used regularly, readers would come to distinguish that one particular ad. by the border..

Day Classes Wanted by English Master Plumbers

Evening Classes are Proving Such a Success That it is Thought Apprentices Should be Allowed Two Days a Week—Importance of Work To-day is Emphasized.

London, England.—The necessity for technical instruction in plumbing work was the theme emphasized most strongly at the annual dinner of the Huddersfield Master Plumbers' Association. A number of speakers, including President Sanderson, referred to it in terms of unqualified praise.

Responding to the toast of “The Mayor and Corporation,” given by the president, the mayor remarked that there was no more important body in the community than the plumbers. He remembered a deputation waiting upon the governors of the Technical College, asking if they were prepared under certain conditions to start plumbing classes. These classes were started, and they had done extremely well, turning out a very much better type of plumber than would have been produced without them. Sooner or later plumbers would have to take up the electrical trade.

Great Advancement Made.

Mr. K. F. Campbell, in proposing “The Institute of Plumbers,” said there was no comparison between the training which plumbers required to-day and that which they received thirty years ago. The advancement in scientific and practical training had been greater in the plumbing trade than in almost any other. Plumbing closely concerned the public health, therefore, the plumber's training must be of a special character.

Advocates Day Classes.

Mr. J. P. Cox, who replied, said the Institute of Plumbers advocated the education of the plumber and believed they were working upon right lines. “We

are,” he said, “endeavoring to make membership of the Institute of Plumbers a passport to the good graces of all public officials, and persons having anything to do with the health of the community. We claim that the plumber stands second only to the medical profession in the good or ill which he can do to the community.” The evening classes were making themselves felt throughout the length and breadth of the country, and the Institute were endeavoring to induce municipalities to institute day classes. Master plumbers were prepared to sacrifice the time of their apprentices to the extent of two days a week in order that they might attend these classes to obtain a knowledge of those principles the application of which would help the community to stamp out disease and bring about a better state of affairs than had hitherto obtained. The ideal of the Institute was that plumbing work should be done in such a way that no one would be able to point the finger of scorn at their trade. The Institute was the only body of a thoroughly national character which had done anything in the true interests of the plumber.

PUBLIC COMFORT STATIONS FOR ST. JOHN.

It is altogether likely, that, in the near future, public comfort stations will be established in St. John, N.B. The Civic Board of Works has appointed a committee to investigate the matter. The proposal, at present, is to locate an underground station on Market Square, and one on King Street.

Up-to-Date Plumbing Show Rooms in Welland

S. P. Gourlay Show a Good Stock in Their Branch Shop in the Growing Town of Welland—Main Offices of Firm are in St. Catharines.

On this page are shown illustrations of S. P. Gourlay's plumbing warerooms in Welland, Ont. The class of stock carried, and the neatness of the display shown in this establishment would excite comment, even in one of the larger cities.

The main offices of this business, are in St. Catharines, where S. P. Gourlay has been in the plumbing business for many years. Two years ago, he was induced by the rapid growth of Welland, to open a branch shop in that town, and, after looking at the illustrations, it need scarcely be said that the venture has prospered.

In a town whose population is increasing so rapidly as Welland's there are plenty of good plumbing jobs and, during the past two years, the Gourlay shop has managed to capture a good proportion of the large contracts.

As will be seen the stock carried consists in a wide range of bath room accessories, gas lamps, gas fixtures and sundries. Welland is the centre of the natural gas belt, and the demand for this class of goods is, of course, large. Mr. Gourlay also does a good business in gas ranges, having the sole local agency for a well-known make.

The Welland business is in charge of F. B. Gourlay, a son of the proprietor, who has had fifteen years' experience in the business. For three years, he was

in close touch with the most modern methods of sanitation, while with W. Mashinter & Co., Toronto. Mr. Gourlay is a member of the Masonic craft, a prominent lawn bowler, and a member of the Welland Club, who, by the way, are at present erecting an up-to-date club house.

Mr. Gourlay states that the coming season is going to be a good one in the plumbing line. Already he has secured some good contracts.

Plumbing Bill in Oklahoma

Due to effective organization work by the Oklahoma Master Plumbers' Association the following plumbing bill is



View of S. P. Gourlay's Warerooms, Welland, Ont., Looking Towards the Front Entrance.



S. P. Gourlay's Warerooms, Welland, Ont. Looking Towards the Rear.

now before their Legislature, with excellent prospects of being put through: An Act to create a Board of Examiners and regulate the business of plumbing. Be it enacted by the people of the State of Oklahoma:

Sec. 1—That in all cities and towns in the state having an underground system of sewerage or cesspools or water systems for sanitary purposes, all persons hereafter engaged in the business of plumbing in said city or town either as master plumber or employing plumber, shall first receive a certificate in accordance with the provisions of this act.

Sec. 2—Any person desiring to engage in or work at the business of plumbing, either as a master plumber or employing plumber in cities having a system of underground sewers or cesspools, shall make application to the State Board of Examiners hereinafter provided for, and shall at such times and place as said State Board may designate be compelled to pass such examination as to his qualifications as said State

Board may direct. Said examination may be made part in writing and shall be of a practical and elementary character, but sufficiently strict to test the qualifications of the applicant.

Sec. 3—There shall be a State Board of Plumbing Examiners, consisting of three members, one of whom shall be the chairman of the State Board of Health, who shall be ex-officio, chairman of said State Board of Examiners, the other two members to be appointed by the governor, who shall be master plumbers, with not less than five years of experience. Said appointment shall be made within three months after the passage of this act, and the appointees shall hold their office for the term of one year, said State Board may appoint any sub-board in any locality they deem necessary.

Sec. 4—Said State Board of Examiners shall meet immediately after their appointment, and shall then designate the times and places for examination of applicants desiring to engage in or work at the business of plumbing within their respective jurisdictions. Said State Board shall examine said applicants as to their practical knowledge of plumbing, house drainage and plumbing ventilation, and if satisfied of the competency of such applicant, shall thereupon issue a certificate to such applicant authorizing him to engage in or work at the business of plumbing. The fee for certificate for a master plumber or employing plumber shall be five dollars; said certificate shall be valid and have force throughout the state, and all fees received for said certificates shall be paid into the treasury of the State Board of Examiners, to defray expense of said examining board where such certificate is issued. The two master plumbers serving on said board shall receive a fee of one dollar for each applicant examined. Said fee is to be paid by the treasurer of the State Board of Examiners.

Sec. 5—Each city having a system of water supply or sewerage shall by ordinance, within three months of the passage of this act, prescribe rules and regulations for the materials, construction, and the inspection of all plumbing and sewerage placed in or in connection with any building in the city; and the Board of Health or proper authorities shall further provide that no plumbing work shall be done, except in case of repairing leaks without a permit first being issued therefor upon such terms and conditions as such city shall prescribe.

Sec. 6—All persons who are required by this act to take examinations and procure a certificate as required by this act shall apply to the State Board of Examiners.

Sec. 7—Any person violating and provision of this act shall be deemed guilty of a misdemeanor, and be subject to a fine of not less than five dollars nor exceeding one hundred dollars for each and every violation.

Sec. 8—All acts and parts of acts in

conflict herewith are hereby repealed.

Sec. 9—For the preservation of the public peace, health and safety, an emergency is hereby declared to exist by reason whereof this act shall take effect and be in force from and after its passage and approval.

A Flagrant Instance of Price Cutting

There are many in the plumbing trade who place too literal an interpretation on the biblical injunction that it is "more blessed to give than to receive." Their whole-souled efforts to give away their profits, and some besides, to customers and such like, might be commendable from the philanthropic standpoint, but can be classed as the rankest of folly from every point of view.

Plumber and Steamfitter has in its possession a rather unique document, sent by a master plumber in eastern Ontario. It is a copy of specifications for a plumbing job which were drawn up by one of his competitors. The party who owned the house did not get the work done after all, thereby showing much shortsightedness. He lost a big bargain. Read each clause and then note carefully, the price clause attached.

Specifications of plumbing for Mr. ———'s house, ——— Ave. :

Soil Pipes.—Provide and run a stack of 4-inch medium soil pipe from cellar drain (provided by owner) to 2 ft. above roof, properly caulked with necessary fittings for different fixtures.

Lead Pipes and Traps.—All lead pipes and traps to be standard weights and sizes.

Closet.—Provide and set up one Fleur-de-Lis combination closet, properly connected to soil pipe with 4-in. 6 ft. lead bend and extra heavy ferrule, connected with cold water supply.

Basin.—Provide and set up one basin (E. 129, Port Hope catalogue), connected to soil pipe with $\frac{1}{4}$ -inch U.P. brass tap. Connected with hot and cold water, using compression bibbs.

Bath.—Provide and set up one Tuscan east-iron enamel bath, $4\frac{1}{2}$ ft. with $1\frac{1}{2}$ -in. overflow and waste connected to soil pipe with $1\frac{1}{2}$ -in. trap, and supplied with hot and cold water.

Range Boiler.—Provide and set up one 30 gallon boiler and stand ready to connect to range. Supply with $\frac{1}{2}$ -inch galv. water mains, also run $\frac{3}{4}$ main from street line to cellar with $\frac{3}{4}$ -inch soil and waste.

Water Pipes.—All pipes in house to be $\frac{1}{2}$ -inch galv. properly supported and connected to different fixtures in best possible manner.

The whole of the work to be done in a thorough and workmanlike manner, thoroughly tested and left in perfect working order. The whole of the work guaranteed for one year, under ordinary usage.

I hereby agree to install plumbing as per the enclosed specifications for Mr. ———, ——— Ave., for the sum of ninety-one dollars (\$91.00).

(Signed).

Ninety-one dollars for the whole contract! The material required for that job alone would cost him \$95. He was then prepared to do the work, charge nothing for his time, help and overhead expenses; and then give the owner four dollars as a token of good will.

Is it necessary to explain that the plumber who drew up these specifications is now out of business? He got a "short shrift." Although sympathy cannot be diverted from men who fail to make a success of business, it is, in a sense, misplaced when the object goes about his own ruin so systematically as the price cutter, invariably does.

Requiescat in pace.

PLUMBING GOODS CATALOGUE.

The Ideal Mfg. Co., Detroit, have issued a new plumbing catalogue 'L,' copies of which are being mailed to the trade. It is very neatly and attractively bound and contains a complete listing and description of the lines carried by the Ideal Co. Each article is illustrated and priced, and the edition, as a result, can be readily used for reference purposes.

WANT THE PAPER.

North Battleford, Sask., March 1.
The MacLean Publishing Co.,
Winnipeg.

Dear Sirs,—After having read a copy of your publication, Plumber and Steamfitter, that was loaned to us, we would be glad to be added to your list of subscribers. Enclosed find postal money order for one dollar for 12 months' subscription to Plumber and Steamfitter, to include January and February publications.

Yours truly,
Wride Bros.

How and Why Pipe Tools are Made---Their Uses

Address by C. C. Macdonald Before Toronto Journeymen Plumbers—A Brief History of the Improvement in Pipe Tools Was Given.

Toronto, March 11.—An address on "Pipe tools, why they are made, how they are made and the uses of same," was delivered by C. C. Macdonald of Macdonald & Sons., manufacturers, before the members of Local No. 46 of Journeymen Plumbers in the Labor Temple last night. President Scott occupied the chair and there was a large attendance of journeymen, probably 150 being present.

Mr. Macdonald first took up the improvements which had been brought about in pipe threading tools. About thirty-five years ago, there was a standard in use on the North American continent which was commonly known as the 3-thread standard, no taper. The American Association on standard and weights then adopted what was known as the Sellers Standard Tapered Thread. Two years' notice of this was given the fitting trade and all manufacturers of fittings and appliances, in order to give the manufacturers time to get out taps for tapping fittings in accordance with the new standard and also to give the trade a chance to get rid of all the old standard fittings. This permitted the Armstrong Manufacturing Co., the pioneer firm in the production of pipe stocks and dies to get out what was known as the solid hock dies. The same were distributed as rapidly as possible so that when a new standard went into effect at the first of the year, the trade were enabled to thread pipe with the new dies, as well as to obtain the new standard tapped fittings. So far as can be traced all manufacturers held to the standard for fifteen years. Then crept in the strip of competition, which cheapened the price of fittings and manufacturers became very lax in their turning out. They overlooked the standard and, in a short time the country was flooded with what was known as "hastard tapped fittings," which were under or over the standard tap-pings. The Armstrong Co. immediately found that the trade complained that there was no adjustment with the solid block die to take these tap fittings, which forced the company to cut their die in half and to place in a new hand stock with the adjustment of such grooves. This would set the die backward or forward as the case demanded. Then followed the 3-piece die and the 4-piece die but, in all these changes, the same idea was carried out as in the solid block die; namely, that the die was as thick through as the cut and taper was on the dies. The same had to be forced on to the pipe, causing the

chips to bind or wedge in the dies and making it hard to thread the pipe and also frequently stripping the thread, which caused numerous leaks on every job. The demand arose for an easier pipe threading tool. This demand had had its fulfillment in what is now known as the Toledo and Jardine pipe threading tools. In getting out these dies, the inventor made them with just enough teeth to do the work, and, instead of putting taper on the dies, he put it on the tapered pins and slots, upon which the dies recede as you advance over the pipe. This reduced friction to a minimum, thereby making it possible to thread the pipe easier.

Pipe Vise Improvements.

Mr. Macdonald then took up the improvements which had been made in pipe vises. Only two changes had been made; namely, from an arch vise, which necessitates the lost motion of throwing over an arch to put a length of pipe in a vise, in addition to the time lost through the running backwards and forwards of the feed screws. The Macdonald vise was shown, in which this lost motion had been done away with and which permitted of a strong and positive grip.

Cutting Tools.

Chief interest in the address seemed to be the part in which Mr. Macdonald dealt with the advancement made in pipe cutting tools, which embraced three stages.

The first tool used was the diamond point chisel. There were some old members of the trade present who recalled the days when they used chisels for cutting, which was a very slow and expensive method. The demand rose for a tool which would cut the pipe quicker and more accurately, and the hevel wheel pipe cutter was evolved. After 15 years of this style of cutter, the trade found that it did not cut the pipe but rolled it under pressure, thereby producing a hurr at least $\frac{1}{8}$ of an inch on the inside and outside of the pipe. In many cases it split the pipe, which would not be noticed until the line was up and the pressure on. The demand for an improvement was met in the Vosper pipe cutter, which cuts in every sense of the word, similar to a lathe cut. Mr. Macdonald demonstrated the use and good points of the Vosper.

Chain Tongs.

The next point taken up was the improvement in chain tongs, from a fixed jaw tong to one whose jaw drops with

its own weight and which a man can push down as well as pull up, in addition to the long looked for advantage of having a combination fitting and pipe tong in one.

The last point touched upon was the recent improvements in pipe wrenches. Some which have been in use for many years, have consisted of upper jaws, lower frames. The trade has found that these become easily locked on pipes, in which case the operator is forced to use a hammer. The best of mechanics have broken the upper jaw or frame of the wrench, or have stripped the teeth on the jaws. Macdonald's non-locking pipe wrenches have been made solely with the object of preventing locking on pipes.

Laughter was created by an offer of \$25 to any member of the Local No. 46, who would lock this wrench at the office of the company, Church street. Quite a number signified their intention of having a try at this easy money.

Demonstrated Misuses.

One of the best features of the address was a practical demonstration of how tools should not be used. Mr. Macdonald showed how mistakes are made and damage done by lack of knowledge of how to handle new tools.

A hearty vote of thanks was tendered at the close.

PLUMBING DISPLAY IN SMALL WINDOW.

Chatham, Ont.—Westman Bros., hardware and plumbers, had recently an attractive plumbing display, utilizing a small corner window. This window, to one side of the entrance, was practically triangular in shape. The walls at the back and side of the window were covered with oilcloth to represent a bathroom, the white painted ceiling helping the general effect. At the side a fully equipped washstand, with connecting pipes, was fastened to the wall. Above this were the little brackets for cup, soap-dish, etc., and further up a couple of towel racks, all properly fastened in place. On the other wall was hung a rubber bath mat, while on the floor of the window was shown a bath tub, sink, and other plumbing appliances.

STEAMFITTERS TO STRIKE.

Chicago, March 6.—A strike of building trades workmen affiliated with the Chicago Building Trades Council, is scheduled to go into effect to-day on all buildings in the down-town district where International Association steamfitters are employed. Business agents outside the Council say at least two-thirds of the trade will refuse to strike.



POINTS ON HEATING

By
CHAS. H. DENISON



Chapter 5.

The boiler and the radiators are connected to each other by means of various sized pipes and fittings. We will begin at the very start, for it is a point that is not always looked to with care, consequently many leaks result.

I refer to the journeyman's work bench, which should be large enough for the purpose; in the best light available and should be as solid as the rock of Gibraltar. Otherwise the workmen will be called on to strain and twist many times to no purpose and finally they say, "Oh, what's the use, let her go at that;" and the "that" most invariably means a bad leak. When the bench is set up to one's satisfaction, it may be next in order to go at the pipe work. If you have made a few comparisons as to the plan and the building, you are in shape to know just how they line up and whether or not it will do to take the measurements directly from the blue prints, or the building itself. Whichever it must be, the most practical way is to measure up the entire main at one "swoop" and then go to the bench and cut it up to the last piece measured, before you attempt to hang a single piece.

In cutting up the pipe, mistake number two is very liable to happen and this mistake is frequently a most costly one. This time I am talking in regard to the use of the pipe cutters. Perhaps half of the men using cutters know (or care) how to turn the trick in the right manner. A pipe cutter is very easily put on the bum, and believe me that is the way that most of the cutters are, in many a shop. If the pipe is cut off crooked, it is a somewhat difficult matter to start on the stocks and dies so that a good straight thread will be the result. It is still a more difficult thing to "catch" that particular thread if you have to do it, when it comes to slinging in the pipe line. Therefore a lack of care right here at the very start may cause a leak, a split or a most crooked and unsightly main at the very point in the cellar where it shows most.

The bench is the proper place at which to make on all the fittings to the pipe that can be applied at that

time. Use a good reliable pipe wrench for the purpose on the sizes up to two-inch and do not get into the habit of sticking a piece of pipe into the ell or tee to "send her up a bit more" for you are very liable to crack the fitting and also will most probably jam some of the threads in the open end of the fitting, thus making another time killer to "catch" later in the work when you may be laying flat on your back under the house and wondering why in the forty-nine kinds of blue lightning the blamed fitting refuses to "catch." It's your own lack of foresight. Always remember that when a thing of this kind happens.

Put up Right Hangers.

As the different pieces of the main have been cut up, it is an easy matter to number them in regular order on the plan and on the pipes themselves whence it will be a simple task to know where every piece is to go. As the last few pieces are being cut, either the fitter or the helper can pull off from the task and start putting up the pipe hangers so as to have things in shape when it is desired to rush the main together. Many fitters make the mistake of putting up temporary hangers made of any old boards or beams that happen to be handy and leaving the pipe hangers for one of the "finishing jobs." The wooden hangers are a nuisance and always in the way; they are not to be relied on for strength; the pipe will roll off the centre on one of them, thus making the entering of the thread a more than usually difficult task and, later, these nuisances must all be pulled down. The right hangers should be placed in the right place at the first time, and fixed to stay.

Then, after seeing that all the pipes are reamed, you are in shape to start to making up the main. No "dope," other than a little lard oil, is necessary, if the fittings are of good quality, the threads well cut and the "elbow grease" sufficient.

Getting Proper Pitch.

The pipe hangers can be so calculated, in length, that the proper "pitch" will be given to the main at the very start and very little leveling will be neces-

sary afterward. As the main goes together, if an ordinary amount of care be used, it is possible to so "set" the various tees, that they will be at about the right angle to take the branching pipe leading toward the radiator when it is required to make up this pipe. The measures for nearly all of the branches can then be taken (assuming that the holes have been cut through the floors for the risers) and said branches cut at the bench and the fittings made on as per former advice.

The next step would be to make home all of the branches, seeing that they have the proper "pitch" after which one is in shape to take the measurements for the risers.

These, in turn, can be cut and fitted at the bench, and properly numbered, the fitter and the helper probably having to separate (one above while the other remains below) as the risers are made into the fittings of the branches.

If the measurements are correct, the threads well cut and the holes plumb, there should be little or no trouble about the way in which the job makes together. At the end of a branch and looking up to catch the pipe that catches the rising pipe, a "pitched ell" is a very desirable fitting to use as it does away with double elling or cutting any crooked threads in order to give the branch the right "pitch."

If floor plates cast in one piece are used they will have to be put around the pipes at the proper places at this time, otherwise split plates can be put on. The various radiator valves can be made on to the stubs at the bench and while you have the valve there so handy it is just the proper caper to see that the stem is packed in the correct manner, not leaving this simple duty for another "finishing job." You have now set the boiler, placed the radiators, connected the steam or hot water pipes to the boiler and radiators and are in shape to "trim" the boiler and place on it the smoke pipe which should have been ordered just as soon as the boiler was set. Let the tinner measure for the smoke pipe himself. You could do it, but if a mistake is made, he had better make it, not you.

A New Soil Pipe Fitting

The following paper was read by W. H. Jennish, plumbing inspector, Waterloo, Iowa, at the sixth annual meeting of the American Society of Inspectors of Plumbing and Sanitary Engineers, held in Milwaukee:

"You may be pardoned if you turn aside and say we have so many soil-pipe fittings in the regular line, and then the special line, that if a man should ever

If the off-set is enough to get a sanitary T or Y into the horizontal space, then it is easy. But when you only have enough space to place two quarter-bends together, with no room for an opening between them, then it's not so easy. The suggested fitting is nothing more than a double quarter-bend with the two inlet openings at an angle to each other in one fitting of 90 deg. and in the other 45 deg.

These fittings can be used either right or left-hand, and with the swing that can be given the closet bend will reach any roughing-in measurement. They will save putting a Y in the vertical line and then with several fittings work around to the desired point. But sometimes even this is impossible owing to

a door on one side and possibly a hot-air stack on the other. I have seen many very bunglesome methods used to get around an emergency of this kind, when a properly-constructed fitting would make a perfect job of it.

"Sometimes there is room enough to place a Y or sanitary T in the horizontal line to receive the closet opening. But from a sanitary point is it not much better to empty the fecal matter into the vertical line than the horizontal, and especially so if there is no other fixture back of it?

"There are many other places where the adaption of these fittings would be ideal, but I have enumerated only those where they seem to be absolutely necessary."

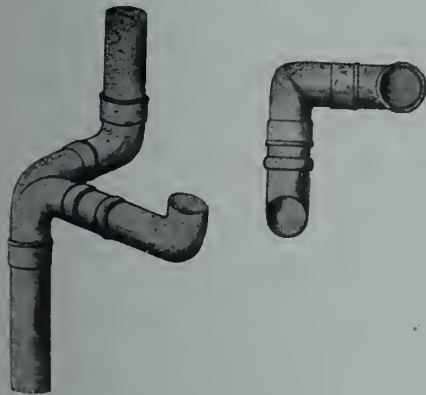


Figure 1.

attempt to carry in stock a fraction of them, he would certainly have a stock much beyond that which the average plumber would feel justified in carrying. But I think I can show you two fittings made in 4-in. size only that are required so often that some or all manufacturers are justified in making them regular stock fittings.

"I refer to a fitting that can be used in an off-set stack in residence work. And I find from six to eight of them every

Revision of Plumbing By-laws was Again Deferred

Ottawa Board of Health Has Not Yet Grappled With the Problem—Question of the removal of Outside Closets was Considered.

Ottawa, March 8.—The situation here with reference to the enforcement of the plumbing by-law is still unsettled. It was expected that the by-law would be revised at the last meeting of the board of health, but action was again deferred. The board approved of suggestions by the plumbing inspector to have galvanized iron pipe instead of lead in fire-proof buildings and also certain changes regarding the sizes of pipes and the construction of joints. Dr. Robinson also had several changes to suggest, but he and the inspector could not agree on them. The board finally decided to have Dr. Robinson act with the inspector in preparing a joint report on suggested amendments for the next board meeting.

Picking Out a Few.

Ald. Forward complained that a resident on Armstrong Street had got notice to remove an outside closet, while six others on the same street had not received notice. He thought all should be treated alike and not one man picked out. Inspector Laflamme said the man mentioned, had received notice because a complaint as to the premises had come in, resulting in an investigation by an officer of the department. Dr. Law also stated that this was a comparatively new district in the city, but that sanitary inspectors would go over the whole territory and all would be notified to comply with regulations.

When the plumbing was under discussion, Dr. Robinson suggested that the licenses for plumbers should be taken out at the health office, instead of at the police station. He also thought the plumbers should be requir-

ed to give a bond for the satisfactory performance of work. At present, he said, there were good and bad plumbers doing work.

Ald. Cunningham said the same argument might be applied to medical men. The suggestion as to license will be taken up with the other proposed amendments at the next meeting.

DARLING'S STEAM SPECIALTIES.

A neat catalogue has been issued by Darling Bros, Ltd., Montreal, showing their complete line of improved steam specialties. It is printed on fine paper, in convenient booklet form, and is profusely illustrated. Among the lines shown are vacuum feed water heaters, purifiers and filters, vacuum pressure regulating valves, grease traps, steam and oil separators, steam traps, pump governors, single-acting steam pumps, vacuum pumps, air compressors, power pumps, automatic lubricators, air washers, disc cutters, hot water heaters, and oil filters.

A municipal building will be erected at Truro, N.S., at a cost of \$20,000.

The sketch for the proposed combination theatre, hotel and office building on the site of the Spencer block, Victoria, shows a large structure of ten storeys to cost about \$1,000,000.

A dairy company, lately incorporated, will erect a dairy building, stone or cement, and stables on 3rd avenue, Owen Sound. The charter members comprise C. Bleich, A. Nichol and P. Harwood, etc.

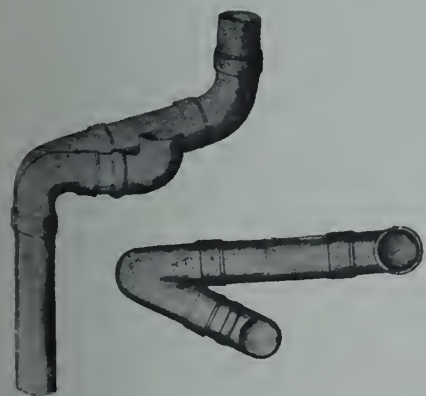


Figure 2.

week. The accompanying sketch will tell the story much better than I can in words. Many times the first and second-floor partitions miss each other all the way from a few inches to several feet.



The Question Box



Subscribers are Urged to Send Questions to be Answered, or to Comment on Letters Published. Descriptions of Jobs Done or Shop Kinks are Also Invited.

CAULKING LEAKS WITH TIN FOIL.

Editor Plumber and Steamfitter,—Sometimes on both the heating and the plumbing jobs it is too much trouble to pull the fittings for a leak and strips of lead do not always give a good job at it. Can you tell me of anything else that will do for this purpose?

Calgary, March 9.

J. P. L.

If the leak is around the thread where the pipe enters an ell, tee, or any such fitting, nine out of ten can be caulked in a short time by using the common tin foil that can be obtained at almost any cigar store. You must clean the pipe at the point of the leak so that you can see where the water starts. Next wind up, loosely, some of the tin foil into a rope like form and place it around the pipe as shown in the drawing. Then take a small and rather dull cold chisel and a light hammer and caulk in the tin foil all around the pipe. You will probably hit the leak



the first time, but if you fail the second time should fetch it. Soft copper wire is also used for this purpose and answers the need quite well.—D.C.H.

LOCATION OF THE GAS DROP.

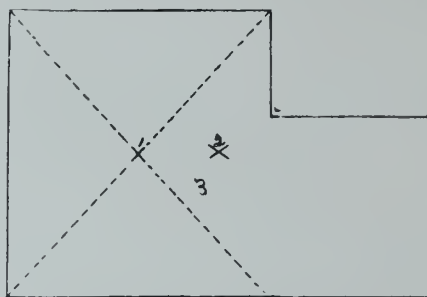
Editor Plumber and Steamfitter,—I have a room of somewhat peculiar shape and the party wants a drop light in the room. Now where can I put this light so as to get the best results and also have the job look all right from a mechanical point of view?

Toronto, March 3.

A. B.

We have reproduced the outline of the room and should be glad to have any views that might differ from the ones that we suggest. The centre of the main part of the room will be found

at the point shown by Fig. 1. Another centre is designated by the Fig. 2. As either point would throw light on the entrance of the room, it would be a matter of preference to the owner. As



far as the mechanical point is concerned we should much prefer to see the light located at point 1. It might be possible to locate the drop at a point midway between 1 and 2, as point 3 and have the general effect somewhat better.—D. C. H.

THREAD STRIPPING ON PIPES.

Editor Plumber and Steamfitter,—Would like to know if you can tell me the reason why the threads, so many times, seem to strip from the pipes? I have been having a lot of trouble that way and would like to get rid of it.

Montreal, March 2.

G. J.

If the pipe is first-class, the trouble may lie entirely with the dies. How long is it since you bought a new set for the shop? We have observed shops that have not had a new set since "Heck was a pup" and were using dies so dull that two men could hardly make up a thread on an inch and one-half piece of pipe, whereas a boy fourteen years old (and then some younger) should be able to do the job easily with most any kind of a modern set in good condition. Granted that the tools are in good condition, the pipe all to the good, the thing resolves itself into mere carelessness on the part of the workman. He either doesn't understand how to run the stocks and dies, or he goes far too shy on the application of some good lard oil. Investigate along these lines and you will probably be able, soon, to nail the difficulty.—D.C.H.

THE OUTLET TO THE VENT STACK.

Editor Plumber and Steamfitter,—To settle a point of difference between two plumbers will you not answer the following question? Is it proper to increase the size of the vent stack as it passes through the roof and stops perhaps a couple of feet above the roof?

PLUMBER.

It is customary to so increase the size of the vent pipe in the countries where the action of the frost would tend to stop up the pipe as has been frequently found to be the case. All sizes less than four inches in size should be increased to four inches, and those over four inches, or four inches, should be increased one size. Begin the increase at a point about one foot below the point where the vent passes through the roof.—D. C. H.

THOSE STOPPED-UP WATERBACKS

Editor Plumber and Steamfitter,—In different localities the plumber has reason to know that these waterbacks or fronts, as the case may be, will stop up with different substances in a few weeks' time. Is there any thing that we can use to do away with the nuisance either partly or for all the time? Should like to see the answer in the next issue if you can.

Brandon, Feb. 6.

STOPPED UP.

The difficulty mentioned is experienced quite commonly over pretty much all the country and many different contrivances have been tried for the purpose of remedying the nuisance. One that has met with success is an appliance which is known as the "Compound Injector." This is not so very expensive and the appliance will save much time the nuisance mentioned to a very great degree.—D.C.H.

It is reported that an English syndicate represented at Montreal, by E. H. Ford, of the Ford Iron Company, will establish a chain of summer hotels throughout the Dominion, beginning at Senneville. Other places mentioned are Toronto, Ottawa, Vancouver, and Winnipeg.

A Plumber's Index for Catalogues

By J. F. Brady.

The endeavors of certain people in the plumbing industry to secure the universal adoption of a standard size for catalogues of plumbing houses, in which are shown their various articles of manufacture, are efforts which should indeed be most heartily encouraged by all manufacturers throughout the country. The small and large, the thin and thick, the stiff bound and the thin bound books issued by the different supply houses, jobbers and plumbing houses, when placed side by side, not only presents a badly looking line of books and pamphlets, but forms a mass of stuff through which it takes time (and time is money) for the plumbing contractor to wade in order to find something for which he is looking.

In addition to this standardizing of catalogue sizes, it would not be amiss for some enterprising firm or man to get out for the individual use of master plumbers, or even for larger houses, an index whereby one can readily find that for which he is in search, or have right there before him the information desired. For instance, in figuring up a job a master plumber may want to know what plate so-and-so is of a certain catalogue, he may desire to refer to a specified maker's catalogue for the price of closets, tubs, lavatories or some article which is mentioned, he may wish to compare the specified make with other makes, to see which he can use in order to cover a larger per cent. of profit, which right is given him by the specified term, "——— make or equal." These and many others may be the reason why he should have before him or at his command some reference by which he could with the least possible delay have recourse to ready information on the subject.

A crude method would be a thumb index book, which, of course, would have to be worked up for sometime before it would really be of much benefit, by the plumber himself or his clerk, in spare moments, but which would undoubtedly take much time; yet until some printed arrangement is gotten out, either for financial gain, or as an advertisement by some of the larger manufacturers, it seems about the best manner, in my mind, of bringing about the results, which should be available for the plumber's use.

Every subscriber to a trade periodical reads it through, and in doing so notes the many advertisements therein. The plumber might take a few minutes longer and jot down in two separate places in this thumb index book, the name of the advertiser and the class of goods ad-

vertised, together with the page number and name of the periodical in which it was seen. In this way a complete record of the many new appliances placed on the market, and which are not catalogued, can be secured—an index which is invaluable the moment one wishes such information in a hurry. This same method must, of course, be pursued through all the pages of the paper, and the papers and the work could be entrusted to a competent clerk or bookkeeper.

A better method, and one which would be even more valuable, and not take up as much room as a pile of magazines would, would be an envelope index. The advertisement could be clipped and placed in a numbered envelope, each envelope, of course, pertaining to the one particular item. The reference in the index book to the page number and name of the periodical could then be changed to simply the number of the envelope, all of which would be filed together in a file box of size sufficient to accommodate a good many.

The recording of data necessary for a ready reference to a catalogue of certain manufacturers could be managed in the same way as the method first referred to, by the cross reference, i.e., the name of the manufacturer putting out the catalogue under his or their name under the name letter, and cross-indexed under the goods put on the market by the house.

One does not realize the value of a good index system of this sort until one has had necessity for its use, and then when he has lost a couple of hours' time looking up some information he will agree with the writer that he can afford to allow some of his help to work out an index system along the lines mentioned herein.

A New Scaffolding Bill

Toronto, March 4.—After reviewing the suggestions which have been made, the special committee appointed to consider Sir James Whitney's Scaffolding Bill decided to have the bill redrafted. The new bill will stipulate that guard rails on scaffoldings shall be 40 inches high; it will forbid the use of single-sling hoists on the outside of buildings; when an inspector finds an unsafe scaffolding the working on which the scaffolding is used must be stopped. The bill will be made applicable to the entire province, instead of towns and cities

only, and in townships all buildings more than two storeys high will be included. The appointment of building inspectors will be made obligatory on all municipalities.

Additional suggestions for the better protection of workmen engaged on buildings where scaffoldings are needed were made by G. W. Watts, of the Canada Foundry, who thought provision should be made for a second flooring beneath the riveting platform in steel buildings, and that a two-inch planking should be used.

A. Wilson, who represented the structural iron workers, thought there should be a three-inch planking above the men where the iron and derrick were on the building, as well as a two-inch planking below the riveters. The members thought there might be some carelessness if two different kinds of planking were used. He asked also that an outside staircase be provided or a double ladder, which would enable two men to go up or down at the same time, which sometimes was necessary.

D. Bullock, representing the plumbers and steam fitters, thought there should be a temporary floor one or two storeys beneath the riveters on steel buildings.

ENGAGED ON BIG CONTRACT.

W. K. Bearisto, head of the Bearisto Plumbing Co., Winnipeg, has been in Balfour, where the company have a \$20,000 contract for plumbing in the C.P.R. tourist hotel, to be known as the Kootenay House. The foreman, George Fraser, has had a force of men at work three weeks, and the plumbing plant will all be installed by May 1. The vacuum heating system is used, the heating plant making use of the exhaust steam.

The hotel will generate its own electric power and the domestic water supply will be an artesian well from 200 to 350 feet deep. The construction of this well is part of Mr. Bearisto's contract, and that point is now engaging his attention.

The Bearisto Plumbing Co. have installed the plumbing for the Laggan, Banff, Red Deer and Fort William depots or hotels, and are now putting in the plumbing for the union depot at Calgary.

According to a letter received by the Welland Public School Board from B. J. McCormick, industrial commissioner, the rumors that a syndicate had been formed to erect at least 200 houses this year is correct. The letter further stated that this syndicate will donate a site of two acres on the condition that a new school is erected



GOSSIP OF THE TRADE

News Brieflets.

Palement & Dansereau, Montreal, have registered.

S. & P. Vallie, plumbers, Montreal, have registered.

R. Hantz has started a plumbing business at Prince Rupert.

Galipeau & Faubert, plumbers, Montreal, have dissolved partnership.

It is reported that William Archibald, plumber, Chilliwack, B.C., has assigned.

E. J. Young, Calgary, has secured the contract for the plumbing in the residence of Col. James Walker, amount \$2,000.

The Engineers' and Plumbers' Supply Co., Toronto, are planning to erect a large warehouse in Regina, Sask., this spring.

The City Plumbing Co., Wetaskiwin, Alta., have received the plumbing and steam heating contracting for the new Angus theatre there.

M. Weichel & Sons, Elmira, have sold their tinsmithing and plumbing business to Frank Rudow, who has had charge of it for a number of years.

L. C. Karstedt has purchased a valuable site on the main street, Owen Sound, and is opening up a plumbing and tinsmithing business.

M. J. Otto, plumber and stove dealer, Dunnville, has enrolled himself with a list of other merchants in that town to conduct a library contest.

R. B. Everest, of Humboldt, an expert plumber and tinsmith, has been added to the staff of MacKenzie, Devline & Co., Kinistina, Sask.

J. Randolph, Chicago, J. G. Sing, Toronto, and T. Aird Murray, Toronto, have been appointed by the Toronto board of control to investigate the waterworks problem there.

Wm. Munroe, who has carried on a plumbing and tinsmithing business in Compton, Que., for some years, has sold the business and store property to Benjamin Spaulding. He will continue to reside in Compton.

Change at Stratford.

Brickman & Co. have bought out the business of D. L. Myers Co., 46 Wellington Street, Stratford, and will put in, at once, a full line of plumbing supplies.

The business will be in charge of D. Brickman.

Tinsmith Passes Away.

The death occurred at Fergus, of Thomas Kerr, tinsmith, from an attack of pneumonia. He was buried in Bel-syde Cemetery, Fergus, under the auspices of the I.O.F. The deceased was formerly of Elora.

Buys Out Business.

Harry Harding has purchased the plumbing and tinsmithing branch of John Douglass' business, Wroxeter. He has already secured the contract for putting in the new furnace in the Ford-wich Methodist church.

Plumbing Shop Saved.

A disastrous fire destroyed the Dun-ton business block, Richmond, Que., damage being done to the extent of \$25,000. The fire brigade did excellent work and saved many other stores, among them that of W. A. Fisk, plumber.

Plumbers Play Hockey.

A terrific contest resulted when the plumbers of Port Arthur met the Fort William plumbers at hockey, and trimmed them to the tune of two goals to one. The Port Arthur tinsmiths were on hand to challenge the winners and the game was arranged for some time in the near future.

Torch Caused Fire.

Plumbers working at the residence of E. B. Goldsmith, 414 Scotland avenue, Winnipeg, left a torch they were using too close to a partition in the kitchen and a fire was started which necessitated the calling out of the fire brigade. The firemen were prompt in their response from Halls 2 and 4, and the damage would probably not exceed \$25.

New Manager Appointed.

H. C. Strong has been appointed manager and treasurer of the Canadian branch of the B.O.T. Manufacturing Co., to succeed O. L. Phipps, who has resigned. Mr. Strong, who was formerly with the Colwell Lead Co., New York, one of the largest plumbing supply companies in America, took over his new duties on March 6.

He Found a Leak.

A leak of natural gas in the store of W. C. Dillon, liquor dealer, Sarnia, was

being investigated by a plumber. The workman lit a match and an explosion ensued, which shook the building. The man was uninjured, but a quantity of plaster was shaken down and other minor damage done. The firemen were summoned, but their services were not required.

An Amalgamation.

The firm of Crowe Bros., Ltd., of Annapolis, Bridgetown and Middleton, hardware and plumbing, has been reinforced by the Parsons-Elliott Co., of Middleton. The amalgamated firm is styled the Crowe, Parsons, Elliott Co., Ltd. They are erecting a large two-story building in Middleton. They will add to hardware and plumbing the sale of vehicles.

Inspector Appointed.

At the last meeting of the council of South Vancouver, several hours' time was given up to the examination of twenty-five candidates for the position of assistant plumbing inspector. Councillor Macdonald had a list of twenty questions and each candidate was catechised on every phase of the trade. It was nearly midnight when the examination came to an end. The final choice fell upon James Matur, of Cedar Cottage, the salary being fixed at \$100 a month. Councillor Burgess gave notice of the introduction of a health by-law.

THE WEIGHT OF WATER.

Lachine, March 6th, 1911.

Editor Plumber and Steamfitter,

Dear Sir,—In the Question Box of your last issue, a man in Winnipeg asked you if hot water and cold water differ in weight. The hot and cold water are of the same weight, but there is less water in a cubic foot of hot water than in a cubic foot of cold water. This is the reason why we generally say that hot water is lighter. For instance, put a cubic foot of cold water in a boiler which holds just that much, and heat it to near the boiling point, some of the water will overflow. Then, put it on the scale. It will weight less, because there is less water in it, although there will be still a cubic foot of water.

A. B.

NEAT WINDOW DISPLAY.

J. A. Caslake, Collingwood, plumber, steam, hot water and gas fitter and metal worker, has a splendid idea of how his shop window should be dressed, as will be seen by the accompanying illustration. The window contains practically everything that a well-appointed bathroom should contain, the stock be-



Samples of Work Turned out by J. A. Caslake, Collingwood.

ing arranged with an eye to good effect. It might well serve as an object lesson to the numerous body of plumbers who do not recognize the necessity for neat and attractive window displays, or else do not care to bother about it.

Mr. Caslake carries shower baths and the necessary fittings, and a complete line of bathroom accessories. That he believes in pushing the sale of these lines is demonstrated by the fact that he gives them a prominent place in his window. It is understood that he does a splendid business in accessories.

A Merchant's Creditors Well Protected

Montreal, March 3.—A new law has just come into effect in Quebec province respecting the disposal by a merchant of a stock-in-trade until his liabilities to his creditors for the unpaid portion of his stock had been satisfactorily taken care of. It is known as "The New Quebec Bulk Sales Act."

It was introduced into the Quebec legislature by men who claimed there were too many traders with dishonest purposes in view. These traders sometimes dispose of their stock in bulk to intending and apparent bona fide purchasers before the former's liabilities have been satisfactorily settled.

By a "bulk sale" is meant any sale or transfer of a stock in trade or of merchandise, including transfers of license, certificates for the sale of intoxicating liquor, made, directly or indirectly, outside the ordinary course of the seller's business, whether the sale or transfer comprises the whole or nearly the whole of such stock in trade or merchandise or whether it relates only to an interest in the affairs or business of the seller.

Buyer Must Get Affidavit.

The New Bulk Sales Act says that any person who, directly or indirectly, buys in bulk a stock in trade or merchandise, shall, before paying the purchase price in cash or on time, obtain from the seller or his agent, an affidavit containing the names and addresses of the persons who have sold him the stock and who have not been paid, and the amounts due or to become due to each of such persons as the price or part of the price.

The affidavit mentioned in this article shall, so far as possible, be in the

form of the schedule annexed to this chapter, and the seller, or, if the seller is a company or a partnership, the president, the secretary or the manager thereof, shall be bound to make the same.

Creditors Must be Paid.

Every sale made in contravention of the above if the buyer has not paid the price of the effects or merchandise to the bona fide creditors of the seller, mentioned in the affidavit referred to shall, as regards every such creditor, be null until such creditor is paid or settled with.

The sale, shall nevertheless be valid if the buyer, after having paid his seller, pays the amount of the purchase price to the bona fide creditors of his seller; and in such case he may recover from the latter the amount so paid.

The buyer, after having received the affidavit shall pay to the creditors mentioned in it, out of the purchase price, rateably and in accordance with the contracts between them and the seller, the money which is due them.

The foregoing does not apply:

(a) To sellers whose creditors have renounced the right to take advantage thereof;

(b) To the executors, administrators, liquidators, curators for the benefit of creditors, or other public officers acting under the authority of the courts.

But it shall apply to persons who are commonly known to buy and sell effects which are usually dealt with in commercial transactions, to commission merchants and in manufacturers.

Seller's Affidavit.

The following is a copy of the affidavit which must be given by the seller:

I, — of —, in the Province of Quebec, seller (or agent of the seller), being duly sworn depose and say:

That I have sold (or agreed to sell, or in the case of a company or a partnership that the — company or the firm of — has sold or agreed to sell my (or its) stock in trade or merchandise situate at — for the sum of \$—;

That the following names and addresses, are the names and addresses of all my creditors (or of all the creditors of the company or firm) who have supplied me (or it) with the effects or merchandise or any part thereof which I have sold or agreed to sell (or which the company or firm has sold or agreed to sell) and that the amounts opposite their names are the amounts which are due to them or which are still to become due.

Names and surnames	Addresses.	Amounts due	
			Amounts to become due



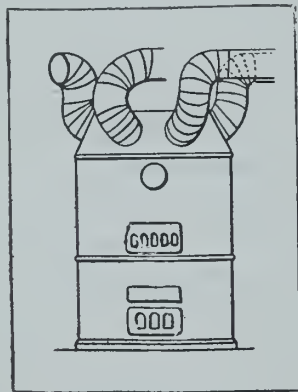
A Good Window Display of Bathroom Fittings.

A Remodeled Furnace Heating System

Owner Insisted on the Carrying Out of His Own Ideas Despite the Opposition of the Furnaceman—Trouble Resulted.

The Metal Worker says:—An instance which is now and then encountered where furnacemen, who know better, are called upon to do work in direct violation of the natural laws, has been reported by a furnaceman who, rather than lose a good customer, was willing to do the work contrary to his judgment. Fortunately for himself he explained to his customer that it would be far better to do the work in a different way from that proposed by the owner, even though the furnaceman's method was slightly more expensive. He emphasized that he would not be responsible for the results if they were unsatisfactory. With this understanding he was willing to violate laws which he knew could not be violated without a penalty. The owner was of the opinion that, owing to the mildness of the Southern climate, the furnace would work sufficiently well to answer all his requirements, but the test of the winter season demonstrated that his conclusions were incorrect and it was necessary to make important changes.

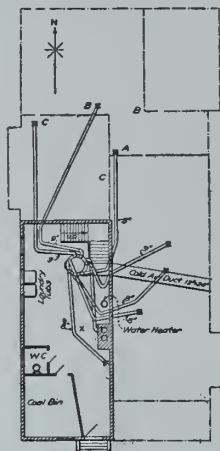
One of the accompanying illustrations shows the original location of the fur-



Original Piping from Furnace.

nace in the cellar, which was in direct opposition to the wishes of the furnaceman. The manner in which the piping was taken off the furnace was also in accordance with the wishes of the owner, who thought he knew how get the largest proportion of air to the rooms in which it was most desired. It shows the use of a far larger number of elbows than necessary and an indirection in the runs of the piping, both of which are not readily overcome by the little pressure which actuates the movement of air through a furnace heating system. The owner did not seem to appreciate that this movement is entirely due to the slight difference in weight of the warmed and cold air and that any impediment is likely to cause the air to back up and go forward slowly only after it has lost considerable of the heat which it is supposed to carry with it for useful purposes.

On the plan, X shows the location where the furnace formerly stood and from which place, due to a failure to give all the satisfaction desired, it was moved to the present location. The method in which the pipes are run in some



Plan of Piping and Location of Furnace.

measure is due to the openings through the foundation wall which were there and caused the pipes to be run as they are now. Again, the owner was not willing to pay for a complete change in the furnace top and the collar also had something to do with the manner in which the pipes are run. A gas water heater for supplying hot water for domestic purposes is also shown.

The cellar only occupied the portion where the heavy lines are presented. The house has brick walls surrounding the space that is not excavated and the pipes as they run under this portion are covered with asbestos, but the piping in the cellar is not covered. The cellar is 7½ ft. in height and there is a space of 3½ ft. between the bottom of the floor flush and the unexcavated portion.

Another illustration shows the front of the furnace and the manner in which the warm-air pipes are taken off the top.

When the cool season came on the furnace heating system was fired up. Until the weather grew cold some heat was delivered through the registers in the various rooms, but when the real test came the dissatisfaction was so marked that the owner was not willing to concede that he was wrong in his views on furnace heating and insisted that an expert be called in to arbitrate as to what was the proper thing to do. The result was that it was recommended that a small portion of the unexcavated space be dug out large enough to accommodate the furnace at the point B on the east side of the cellar now in existence. This then would enable the registers B and C to be moved to the new location indicated by the letters B and C and the register A to the point in-

dicated by the letter A. It would also necessitate that an opening be cut through the wall to accommodate the register E.

This work has now been done and the air supply has been taken from one of the west windows near the laundry tubs, the size being the same as before. Greater interest attaches to this piece of faulty furnace work than the rearrangement of it, as suggested from the fact that now that the remodeling has been completed and the furnace has been tested, entire satisfaction to the owner and a comfortable temperature in each room demonstrate the advisability of furnacemen insisting more positively on doing work in the proper manner.

SOLDERING ALUMINUM.

Editor, Plumber and Steamfitter.

Dear Sir:—On the last issue of your paper, the "Plumber and Steamfitter," I have remarked your article "Soldering aluminum" which I should declare erroneous.

In the present communication I call your attention on the following points:

1. If we make abstraction of the specific heat of Aluminum and its great heat conductivity, we can say that the temperature for soldering aluminum mostly depends upon the point of fusion of the solders used, if they are well adapted to their aim and scope.

2. Aluminum does alloy with lead, according to H. Moissan in his "Traite de Chimie Minerale, Tome IV.," and I can show a sample of aluminum and lead brazed together. Consequently no reason remains why lead should not be used in solders for aluminum, as well as for other metals.

3. I would not use zinc too freely in aluminum solders on account of its action on boiling water which it decomposes at 100 per cent. F. Furthermore, zinc will easily corrode under the action of the common sea salt or of the ordinary vinegar (acetic acid) in the culinary utensils.

4. The most of the ordinary metals are used in different types of solders.

5. The soldering iron is liable to do the work very easy and nicely in as much as you will use the proper solder for soldering at a low temperature of, we will say, from 1,700 C to 2,250 C.

6. The aluminum oxide coating will be removed mechanically by abrasion or better chemically and quickly by washing it off with traces of carbon tetrachloride, at the time that soldering is going on.

7. If the tinning of the aluminum parts has been properly done and you use a good aluminum solder, this last one will flow perfectly well into an aluminum joint similar to the action of other joints.

Yours truly, Max Audy.

New Buildings, Water and Sewerage Systems

Opportunities Offered by Municipalities and Private Enterprise for New Plumbing, Heating, Ventilating or Sanitary Systems—Work Being Undertaken in Every Section of the Dominion.

Municipal Undertakings.

Goderich will spend \$30,000 on waterworks this year.

The ratepayers of St. Lambert, Que., voted for the borrowing of \$225,000 for permanent road improvements.

A waterworks system will be established at North Portal, Sask., by the C.P.R., at an estimated cost of \$50,000.

Lethbridge, Alta., is considering the construction of a gravity system of waterworks, at an estimated cost of about \$800,000.

Public Buildings.

A new wing is to be added to the post office building at Kingston.

A modern school building is to be erected at Dartmouth, N.S.

The I.O.O.F. are said to be planning the erection of a \$50,000 building at Hamilton, Ont.

The separate school board at London are considering the erection of a new school in the north end.

The congregation of Grosvenor Street Presbyterian church, Toronto, have decided to build on a new site.

The Baptist church at St. George, Ont., which was recently destroyed by fire, will be rebuilt, at a cost of \$20,000.

A by-law to authorize the expenditure of \$60,000 on schools will be submitted to the ratepayers of South Vancouver.

A wing is to be built on the Senate side of the Parliament buildings at Ottawa, at an estimated cost of \$300,000.

The congregation of St. Mary's R.C. church, Simcoe, are contemplating the erection of a resident for their parish priest.

Tenders are called until March by the Public Works department, Victoria, B. C., for an addition to the new Michel school.

A campaign is to be launched in Berlin, B.C., to raise \$30,000 for the erection of a permanent home for the Y. W. C. A.

The Dominion Government is considering the erection of a separate building at Ottawa to serve as a national art gallery.

The city of Calgary will spend approximately this year \$500,000 in the erec-

tion of new schools and improvements on those already erected.

Steps will shortly be taken for the purpose of erecting a new Christ Church cathedral at Victoria, B.C., to cost in the neighborhood of \$250,000.

A Labor Temple is to be built in Vancouver, at the corner of Dunsmuir and Homer Streets. It will be four storeys in height and will cost \$143,000.

The plans for the improvements to Wycliffe College, Toronto, have been passed. A new chapel and principal's residence will be erected at a cost of \$40,000.

The Masonic Temple Co., Edmonton, have under serious consideration the commencement of their new Temple shortly, at an estimated cost of about \$125,000.

Diocesan buildings are to be concentrated at Regina. They will include a cathedral, St. Chad's College, a bishop's court and residence and a hostel. The cathedral alone will cost more than \$250,000.

The Bible Society Board, Winnipeg, have decided to start a campaign to raise funds to build a Bible house to cost, with site, \$60,000, towards which the parent society at London, Eng., will contribute the last \$20,000.

The proposal to build a new club house for the Shamrock A. A. A., Montreal, has been abandoned, and it has been decided to make considerable extensions to the old building in Mile End. This will include a modern gymnasium, swimming bath, bowling alleys and hand ball court. The plans are now being prepared by the executive committee and work will be started early in the spring.

General Buildings.

The Bank of Commerce will erect a new branch building at Quebec.

An abattoir is to be erected at Guelph by A. Barber, at a cost of about \$10,000.

J. M. Shuttleworth, Brantford, is to erect a handsome residence on the Hamilton road.

The Aultman-Taylor Co., Regina, are preparing plans for the erection of a large warehouse.

The Oliver Chilled Plow Works are

said to be spending \$600,000 on their plant at Hamilton.

A transept and nave will be added to St. Alban's cathedral, Toronto, at a cost of about \$300,000.

Nimmo & Soper have formed a syndicate at Ottawa and will erect an office building on Albert Street, near Bank.

The C. N. R. are preparing plans for additions and extensions to their terminals at Edmonton, to cost about \$30,000.

A building permit has been issued at Winnipeg to A. P. Johnston, 796 Victor street, for an apartment block on Agnes street, to cost \$50,000.

Marsh & Henthom, Ltd., Belleville, manufacturers of hoisting engines and boilers, are seeking a new location their plant having outgrown their premises.

George Dawson, Vancouver, is having plans prepared for the proposed business block to be erected at the corner of Hastings and Main Streets, at an estimated cost of \$125,000.

Henry Black, contractor, Regina, will move the old building on Hamilton street, once used as a church and on the site will erect a 3-storey apartment building at a cost of about \$30,000.

It is announced that Charles Greer, manager of the Alexander hotel, will erect a large hotel at Graham, the G. T. P. divisional point, near the junction of the transcontinental line of the G. T. P. and the Lake Superior branch.

Permits were issued at Victoria recently to R. L. Spragge, dwelling on Albany street, \$2,100; Capt. James Hunter, dwelling on St. Andrew's street, \$2,700; George E. Handley, dwelling on Cedar Hill road, to cost \$4,000.

Building permits at Victoria, B.C., were issued to Mrs. McCarter, dwelling on David Street, to cost \$2,500; to Mr. Reginald Genn, dwelling on Prior Street, to cost \$2,000; W. Dunford & Son, dwelling on Princess Avenue, \$2,800; J. Townley, dwelling on Simcoe Street, \$2,800; E. Tuck, dwelling on Grant St., \$2,800; W. N. Hall, dwelling on Robertson Street, \$2,000.

Appointed Inspector.

A plumbing inspector is to be appointed at Saskatoon. The recommendation from the Board of Health that he be under that board, was approved.

Nicholson & Barry, Montreal, have dissolved.

PLUMBING AND HEATING MARKETS

SUMMARY OF MARKETS.

An advance of 10 per cent. is announced in flat-rimmed enamelware sinks.

Solder is a little easier in price as a result of the weakening on the tin market.

Demand for all lines of plumbing supplies is growing satisfactorily.

MONTREAL.

Montreal, March 11.—General reports from the plumbing trade show that conditions are fairly satisfactory. Some report that they are rather slack while others say they are busy. It is evident that work as yet is not uniformly divided. The present is not considered to be a very busy season but up to the present the situation has been generally rather favorable. Some of the trade state that they have just about exhausted the work they had on hand and are now looking forward for new offers. For the next few weeks it is believed work will be more or less uncertain until the new conditions fully assert themselves. Indications are that a good year will soon open up and the future is looked forward to with considerable confidence.

Enamelware—The demand for enamelware is fairly good with a certain amount of business passing. The time during which new business begins to be felt is not yet here and in the meantime the trade are more or less contented with the business that is passing.

Plumbers' Supplies—The trade in plumbers' supplies is reported good for this time of the year and is spread out along general lines.

Soil Pipe—There is a little better feeling in this department. Demand shows improvement with the weather, although the busy season is not quite due. Discounts for medium and heavy are 70 and 10 per cent.

Lead Pipe—Demand is not very heavy yet but business is moving fairly well. The amount of general business reported thus far bespeaks a good season. Prices are: pipe and waste, 9 cents per lb.; calking lead $4\frac{1}{2}$ cents; traps and bends, 50 cents.

Solder—With tin in about the same position as when last referred to and solder in fairly good demand prices are firm. As the possibility of pursuing outdoor work increases the demand improves.

Iron Pipe.—There has not been much change in this market. A certain amount of business is passing, good for this time of the year, but on the whole rather limited. The feeling is one of

satisfaction as prospects for the future are taken into consideration.

Radiators and Boilers—There is some business reported but the heating question is beginning to be of lesser moment as finer weather approaches. There are the hopes of good business, however, when new buildings get under way but just at present the situation is a little dull.

Metals—Steadiness is a feature of the metal market just now. Demand, from a plumbing standpoint is not heavy although a fair business is reported and conditions are considered fairly satisfactory. Tin has been fluctuating more or less but with little change to the trade. There seems to be a good undertone to the copper market. Lead and spelter are rather dull. The whole markets are not yet under the influence of the new business except in some particular cases. As stated, however, the outlook is a good one.

TORONTO.

Toronto, March 13.—Conditions are becoming much brisker. The supply houses are getting busy and orders are coming in with regularity. If the present weather holds for a while, there will be an early opening of spring business.

The market has seen a number of changes during the past week. Flat-rimmed sinks have gone up about 10 per cent., and some changes are also noted in lavatories. Solder has shown a tendency to slacken off in price, owing to the decrease in tin.

Enamelware.—There has been a general shifting around in the prices of enamelware. Tubs went up \$1 a fortnight ago, as was reported in the last issue of Plumber and Steamfitter. This change holds good. The increase of 10 per cent. recorded last week in lavatories applies to a certain number of lines only and it is given out to-day that in other lines there has been a decrease of 10 per cent. Flat rimmed sinks have been advanced approximately 10 per cent. The demand is increasing quite satisfactorily, and quite a good-sized trade is being done now in these lines.

Boilers and Radiators.—There is still considerable work being done in the heating line and orders are being placed for boilers and radiators. There is more activity apparent than in plumbing work, owing to the open weather, which has prevailed. There is every evidence of a rushing trade this year in the heating line. Building operations will be brisk in all parts of the country.

Soil Pipe.—The demand is still fairly fairly small. Medium and heavy is quoted at 75; 7 and 8-inch sizes stand at 50 per cent.

Lead Pipe.—Conditions have improved and it is expected that a good demand will be experienced shortly. Lead waste is quoted 9c. per lb., and calking lead at $4\frac{1}{2}$ c. per lb. Traps and bends stand at 50 per cent.

Iron Pipe and Fittings.—There is an improvement in the tone and business is becoming brisk. Cast iron fittings are quoted at 65 to 70. Malleable fittings stand at $37\frac{1}{2}$ to 40 per cent. Other quotations are: cast iron bushings, 70; malleable, $67\frac{1}{2}$; nipples, 75 and 10; headers, 60 and 10; flanged unions, 70; malleable-lipped unions, 65 per cent.; galvanized pipe, \$6.18; black pipe, 1-in. size, \$4.54.

Metals.—There is a strong tone to the metal market locally. Orders are received in good volume and of good size in most metals. Tin has slumped but business has not suffered in any respect from that cause; in fact, it is brisker than ever. The price is 43c, which is 3c below last week's quotations, but so unsettled is the primary market, that a return to the higher figure at any minute would not create surprise. Antimony has gone up in price to 11 cents as a result of the formation of a European syndicate.

NEW "KING" BOILER.

The new "King" boiler, manufactured by Steel and Radiation Ltd., Toronto, is now on the market. It contains a number of entirely new features and improvements, which are of interest to heating engineers. The special design of the combustion chambers and water-ways guarantee a maximum amount of heat from a minimum fuel consumption. One of the most important features, however, of the new "King" boiler is the shaking and dumping grate, which is operated by a handle in front, as indicated on accompanying cut. The handle is always in position, and no stooping is necessary to shake it. To dump the grates the handle is reversed.

Another important feature is the absence of bolts or pins in attaching the connecting bar to the grates, consequently it is a comparatively simple matter to make repairs, when any part needs replacing.

The fire pot is corrugated, thereby greatly increasing the surface area on which the fire acts. Thinner water-ways have been provided, thereby increasing the circulation. The openings from the fire pot and from the section to the water-post are made larger, thus decreasing resistance and friction and allowing freer circulation.

The boiler is being made in half sizes, so that it will be possible to order closely to actual requirements.

A new road to profit !

With only a small initial outlay, any plumber can boost his business and make good extra profit if he features—

MORRISON

Lighting Fixtures



For artistic excellence and quality of materials they are unequalled, and you can handle lighting fixtures without crowding your store—just hang them from the ceiling.

Catalogue mailed on request.

THE JAMES MORRISON BRASS MFG. CO.
Limited

93-97 Adelaide St. W., Toronto



A NEW VALVE

JENKINS BROS.'

GUN METAL AND IRON BODY

GATE VALVES

“TYPE K”

Special Features:

Highest Quality Steam Metal. Perfect Interchangeability. Double Compensating Bronze Wedges. Metal Gland in Stuffing-Box. Great Strength of All Parts. Carefully tested to 250-lbs. Water Pressure

UNRIVALLED IN DESIGN AND WORKMANSHIP

A Thoroughly Reliable Gate Valve for Steam, Water, Oil, Gas or Air. A trial will convince you that it will pay you to use these valves on all your work.

Stamped with TRADE MARK like cut.

Stocked by Machinery, Hardware and Supply Dealers throughout the World.

Catalogue and Full Particulars Cheerfully Furnished on Application.

JENKINS BROS., Limited

Head Office and Works:

102 St. Remi St., Montreal, Canada

And at

95 Queen Victoria St., London, E.C.



Condensed or "Want" Ads.

SITUATION VACANT.

WANTED—A tinsmith and plumber. One capable of laying out and figuring a furnace or bathroom job. State, first letter, age, nationality, experience, and with whom, if total abstainer, wages expected, if married, and names of references. Correspondence confidential. Apply F. E. HENDERSHOT, Mount Forest, Ont. (6)

MISCELLANEOUS.

ADDING TYPEWRITERS write, add or subtract in one operation. Elliott Fisher, Limited, Room 314, Stair Building, Toronto.

YOU don't buy a National Cash Register—it pays for itself. Saves money. Prevents mistakes. We can prove it. National Cash Register Co., 285 Yonge Street, Toronto.

ACCURATE COST KEEPING IS EASY if you have a Dey Cost Keeper. It automatically records actual time spent on each operation down to the decimal fraction of an hour. Several operations of jobs can be recorded on one card. For small firms we recommend this as an excellent combination—employees' time register and cost keeper. Whether you employ a few or hundreds of hands, we can supply you with a machine suited to your requirements. Write for catalog. International Time Recording Company of Canada, Limited; office and factory, 29 Alice Street, Toronto.

COPELAND-CHATTERSON SYSTEMS—Simple, adapted to all classes of business. Copeland-Chatterson-Crain, Ltd., Toronto and Ottawa. (1f)

COUNTER CHECK BOOKS.—Write us to-day for samples. We are manufacturers of the famous Surety Non-Smut Duplicating and Triplicating Counter Check Books and Single Carbon Pads in all varieties. Dominion Register Co., Ltd., Toronto.

COUNTER CHECK BOOKS—Especially made for the plumbing and steamfitting trade. Not made by a trust. Send us samples of what you are using—we'll send you right prices. Our holder with patent carbon attachment has no equal on the market. Supplies for binders and monthly account systems. Business Systems, Limited, Manufacturing Stationers, Toronto.

DOUBLE your floor space. An Otis-Fensom hand-power elevator will double your floor space, enable you to use that upper floor either as stock room or as extra selling space, at the same time increasing space on your ground floor. Costs only \$70. Write for catalogue "B." The Otis-Fensom Elevator Co., Traders Bank Building, Toronto. (1f)

EGRY BUSINESS SYSTEMS are devised to suit every department of every business. They are labor and time savers. Produce results up to the requirements of merchants and manufacturers. Inquire from our nearest office. Egray Register Co., Dayton, Ohio; 123 Biv St., Toronto; 258½ Portage Ave., Winnipeg; 308 Richards St., Vancouver.

FIRE INSURANCE. INSURE IN THE HARTFORD. Agencies everywhere in Canada. (1f)

MAKE MONEY AND SAVE MONEY with the Multigraph. It does multiole typewriting and real printing. 1200 to 5000 sheets an hour, gets new business with form letters or printed advertising, saves 25% to 75% of printer's charges on stationery and forms. American Multigraph Sales Co., Ltd., 129 Bay St., Toronto.

INDISPENSABLE in Office, Store, Home—Canadian Almanac, 1911—a National Directory. Complete classified information on every subject of Dominion interest. Full postage, customs banking, insurance, legal, educational, newspaper, army, clerical, governmental, particulars of leading institutions and societies. Paper covers, 60c; cloth leather back, 75c. All stationery, or sent postal on receipt of price by The Copp-Clark Co., Ltd., Toronto.

KAY'S FURNITURE CATALOGUE No. 306 contains 160 pages of fine half-tone engravings of newest designs in Carpets, Rugs, Furniture, Draperies, Wall Papers and Pottery with cash prices. Write for a copy—it's free. John Kay Company, Limited, 36 King St. West, Toronto.

WAREHOUSE AND FACTORY HEATING SYSTEMS. Taylor-Forbes Company, Limited. Supplied by the trade throughout Canada.

MODERN FIREPROOF CONSTRUCTION. Our system of reinforced concrete work, as successfully used in many of Canada's largest buildings, gives better results at lower cost. "A strong statement" you will say. Write us and let us prove our claims. That's fair. Leach Concrete Co., Limited, 100 King St. West, Toronto.

PENS—The very best Pens made are those manufactured by William Mitchell Pens, Limited, London, England. W. J. Gage & Co., Limited, Toronto, are sole agents for Canada. Ask your stationer for a 25c. assorted box of Mitchell's Pens and find the pen to suit you.

RETAIL MERCHANTS AND OTHERS with a limited correspondence will find it to their advantage to write us for catalogue of special bargains in rebuilt Typewriters. We have all the well known makes, taken as part payment on the Monarch, and at the prices we offer them they are remarkable bargains. The Monarch Typewriter Company, Ltd., 46 Adelaide Street West, Toronto, Ont.

THE "Kalamazoo" Loose Leaf Binder is the only binder that will hold just as many sheets as you actually require and no more. The back is flexible, writing surface flat, alignment perfect. It cannot get out of order. No exposed metal parts or complicated mechanism. Write for booklet. Warwick Bros. & Rutter, Ltd., King and Spadina, Toronto.

BOOKS FOR PLUMBERS.

PRACTICAL HINTS ON JOINT WIPING, for beginners in plumbing. This book contains two original articles on joint wiping by experts, together with a selection of letters and articles on various important phases of the subject. 66 pages, 41 illustrations. Price 25c.

MACLEAN PUBLISHING CO., Technical Book Dept., 143-149 University Avenue, Toronto.

THE WANT AD.

The want ad. has grown from a little used force in business life, into one of the great necessities of the present day.

Business men nowadays turn to the "want ad" as a matter of course for a hundred small services.

The want ad. gets work for workers and workers for work.

It gets clerks for employers and finds employers for clerks. It brings together buyer and seller, and enables them to do business though they may be thousands of miles apart.

The "want ad." is the great force in the small affairs and incidents of daily life.

Keep in mind the dominant fact that mankind from its first appearance on the earth has been schooled by nature to look for signs; for invitations to taste; for suggestions as to what to wear. Tell your story briefly, forcibly, truthfully, and address it through the proper media and you can successfully apply advertising as a means to increased distribution.

When writing advertisers kindly mention having seen the advertisement in this paper.



Vulcan-Bijaws

(The Improved "Vulcan")

Not a Gamble!

We are anxious to have you understand what you are getting in "Vulcan-Bijaws."

The tools are made by the pioneers in Chain Tool business. The experience of years is crowded into the "Vulcan-Bijaws."

1. **THE OPERATION:** Same as old "Vulcan" tool—nothing new to learn.
2. **THE LIFE:** The reversible jaws provide double service of any similar tool.
3. **THE STRENGTH:** Auxiliary bolt provides for accident emergencies and strength of tool is vastly increased.
4. **THE QUALITY:** Unequalled and every part fully guaranteed, same as "Vulcan."
5. **THE PRICE:** Same as for old style non-reversible jaw-tool, of "Vulcan" quality.

Consult your dealer

J. H. Williams & Co.

Superior Drop-Forgings

77 Richards Street

BROOKLYN

NEW YORK

DIRECTORY OF MANUFACTURERS

Plumber and Steamfitter receives, from time to time, enquiries for the names of manufacturers of various lines. These enquiries come from firms who usually intimate they have looked through Plumber and Steamfitter but cannot find any firm advertising the line in question. In many cases these firms are anxious to secure the information at once. This page enables manufacturers to keep constantly before the trade lines which it would not pay to advertise in larger space.

EMERY WHEELS.



**Canadian
Hart Wheels**
442 Barton St. East, Hamilton
Corundum and Emery Wheels
Grinding Machines, Beaver
Oil Stones.

SHELF BRACKETS.



Will Hold Up a Shelf
That's what a shelf bracket's for
For this purpose there can be
NOTHING BETTER, NOTHING
CHEAPER than the BRADLEY STEEL
BRACKET. It is well Japanned, Strong and
Light. The saving on freight is a good profit
aside from the lower price at which the goods
are sold. Order direct or through your jobber.
ATLAS MFG. CO., NEW HAVEN



**THIS IS THE DAY OF
INVESTIGATION**

Get in line and let us prove
to you that the

**GENUINE
Armstrong Stocks and Dies
ARE THE BEST.**

Catalogue on request.



The Armstrong Mfg. Co.
317 Knowlton St.
Bridgeport, Conn.

FILTERS.

Anti-Splash Tap Filters
The "Galvo" Filter and Water Steriliser
"Perfection" Fire Extinguishers
There's good money in them for hardware dealers.
Write for Prices.
The Anti-Splash Filter Co.
OWEN SOUND - - - ONTARIO

MANUFACTURERS' AGENTS.

The Manufacturers Sales Co.
MONTREAL
Frederick H. Reid, Manager
Representing manufacturers of high-class specialties,
including "Handbook," "So-Clean," and others.
We are open at any time to receive propositions from
first-class manufacturers who wish to be represented in
Canada. Write at once. Best of references.

MANUFACTURERS' AGENTS.

Western Distributors, Limited
CUSTOMS BROKERS
Wholesale Commission Merchants and Manufac-
turers' Agents. Cars Distributed, Warehoused
and Forwarded. Warehouse on Trans-
fer Track. Business solicited.
OUR POSITION IS YOUR OPPORTUNITY
SASKATOON, WESTERN CANADA

BRONZE POWDERS BRONZE LIQUIDS

The
**Canadian Bronze
Powder Works**
Montreal Toronto
Works, Valleyfield

Send us your orders and we guarantee the
quality

When writing advertisers kindly men-
tion having seen the advertisement in
this paper.

TINSMITHS' HELPER AND PATTERN BOOKS



A useful handbook for Tinnerns and Sheet Metal
Workers. It treats the simpler problems in pattern
cutting occurring daily in the shop besides giving tables
and information constantly needed by the mechanic.
Section 1—DIAGRAMS and PATTERNS. Demonstrates
50 examples of pattern work, such as cutting flared tin-
ware, elbow patterns, etc.
Section 2—EPITOME OF MENSURATION. Describes
how to find the area and circumference of a circle, con-
tents of a sphere, etc.
Section 3—TABLES, RULES and RECIPES. Gives the
weights of sheet metals, capacity of cans, recipes for
mixing solders, cements, etc.

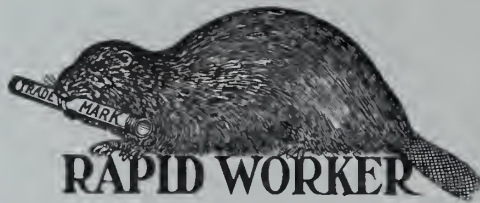
Price \$1.

53 Figures

MacLean Publishing Company
Technical Book Dept. 143-149 University Ave., Toronto, Can.

Nature has solved the
problem of distribution.
It uses a multitude of
agents to effect the distri-
bution of its products.

Nature does not expect
every seed to fall upon fal-
low ground and to take
root. But, it achieves a
profitable percentage upon
its distribution. This is all
that an advertiser has to
do to reap a profitable
harvest on his outlay.



RAPID WORKER

One man with a Beaver Die Stock is worth two or three men with any other Die Stock made.

"Beaver" Adjustable Die Stocks

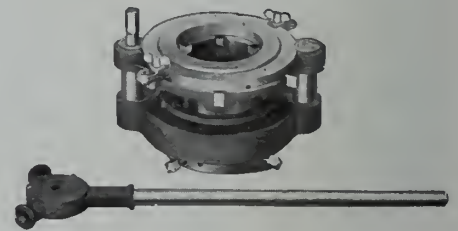
HAVE cut the cost of pipe threading in two because they will thread all sizes of pipe without changing dies. They are built on the receding principle which positively enables one man to thread any size of pipe and produce absolutely tight joints for all work, including hot water. They save the time formerly used up in changing dies and looking after loose parts, and eliminate all of thread-stripping when backing off.



No. 25A, threading 1, 1¼, 1½, 2-inch pipe.
A boy can operate it.



No. 6, threading ¾, 1, 1½, 2 inch, complete



No. 60. Uses two sets of dies. One set cuts 2½, 3, 3½ in. the other cuts 4, 4½, 5, 6 in.; they are inserted without removing any parts.

No loose Bushings or loose Dies on No 25A and No 6, and they cut 1, 1¼, 1½ and 2-inch pipes.
We can furnish a separate set of dies for 1, 1¼, 1½ and 2-inch pipe.

Write us for Illustrated Price Lists.

BORDEN CANADIAN COMPANY,
66 Richmond Street East Toronto, Ontario

The Trained Salesman

The Trained Salesman is practically independent. Scores of business houses seek his services.

It should, therefore, be the aim of every young man to qualify himself for a higher position. This he can do in his spare time, just as hundreds of others have done.

No work so quickly develops poise, self-reliance, ease, ability to grasp situations, instinct to meet the demands of the moment, and capacity to meet men and women on their own ground as representing the MacLean Publications.

This work puts you in touch with the big men of each town. A connection of inestimable value.

We want a representative in practically every town and centre of population to secure new and renewal subscriptions.

To those who devote only part of their time we can offer an attractive proposition. Experience is unnecessary. We show you how, which in itself is an excellent training in salesmanship.

Your name and address sent to us will bring you a complete prospectus.

MacLean Publishing Company
143-149 University Avenue - Toronto, Ontario



YOU CAN SAVE MONEY BY DEALING WITH US

Our stock of Plumbers' Supplies is one of the largest in the Dominion, and embraces all the most reliable lines, from a washer to the complete modern bathroom outfit. When you order

"Scotia" Plumbing Supplies

you get the right goods quick. You save money by getting the

Lowest Prices

consistent with good quality and by avoiding delayed or wrong shipments.

Test us with a trial order for anything in plumbers' supplies.

WM. STAIRS, SON & MORROW, Ltd.
HALIFAX ESTABLISHED A.D. 1810 NOVA SCOTIA

Will You Partner With Us in Radiators?

Recommend and install the

"SOVEREIGN" RADIATOR

It is made in a large number of designs, and fits handily into any vacant spot in store, office or home.

Your reputation is at stake when you install a modern heating plant. See that the reflection is all you could desire by installing the "Sovereign"—the radiator that always makes good!

Send for booklet and particulars.

Taylor-Forbes Co., Ltd.

Head Office and Works - GUELPH, ONT.

Taylor-Forbes Co., Ltd., 246 Craig St. W., Montreal. H. G. Rogers, 53½ Dock St., St. John, N.B. W. A. MacLennan, Vancouver, B.C. J. B. H. Rickaby, Victoria, B.C. Harry F. Moulden, Travellers' Building, Winnipeg, Man. Canadian United Manufacturers Agency, London, Eng.



PLUMBER AND STEAMFITTER



*Star Expansion Bolts
Hold Anything*



The final decision when strength and security is an absolute requirement, is the

Star Expansion Bolt

It is a combination device to be used in fastening all kinds of fixtures to walls of stone, brick, tile, wood, etc. Particularly adapted for the work of Plumbers and Steamfitters.

The Star Expansion Bolts are absolutely dependable and can be used anywhere that an ordinary bolt or screw will not hold. You will benefit by the knowledge gained from a demonstration of the use of Star Expansion Bolts and Sebeco Screw Anchors.

Just tell us what kind of work you are doing and we will send free samples with our seventy-page illustrated catalogue of interesting instructions, that will help you and show you a way to save money.



STAR EXPANSION BOLT CO., CATALOGUE DEPT. 74, 147 CEDAR STREET, New York

SUPPLY

"Kerr" Radiator Valves

on your heating work, and
your valve troubles are over

The

Kerr

Engine

Co., Limited

Walkerville - Ontario

*We charge the
price and furnish
the reliable goods*

Look for
Our Name
"KERR"
on All
Genuine
KERR
VALVES



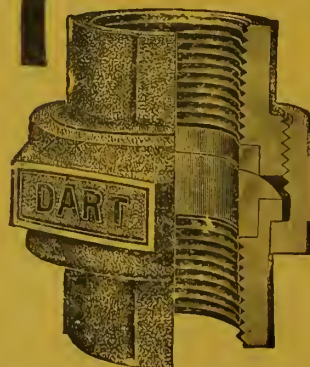
Dart Unions

—the joints that cannot leak or
corrode. They give the most easily
made and perfectly tight joint possible
—a bronze to bronze ball joint instantly
made. The surest satisfaction-giver on
the market.

*Ask Your Jobber for
DART UNIONS.*

Dart Union Co.
LIMITED

Niagara Street
TORONTO



PLUMBER & STEAMFITTER

and Sanitary Engineer of Canada

THE MACLEAN PUBLISHING COMPANY, LIMITED, PUBLISHERS

MONTREAL, 701-702 Eastern Townships Bank Bldg.
LONDON, ENG., 88 Fleet St. E.C.

TORONTO, 143-149 University Ave.

WINNIPEG, 511 Union Bank Building
NEW YORK, 115 Broadway

Vol. V.

Publication Office : TORONTO, APRIL 1, 1911.

No. 7



THE
STANDARD
COMPANY LIMITED
GENERAL OFFICES AND FACTORIES - PORT HOPE - CANADA

ENAMELED IRON WATER
CLOSET COMBINATIONS insure
the Highest Degree of Per-
fect Sanitation, because they
are manufactured with ma-
terials that are Positively
Non-Absorbent.

117 OF THESE COMPLETE
ENAMELED IRON W. C.
COMBINATIONS ARE
BEING FITTED IN

FREEMAN'S NEW HOTEL
ST. JAMES STREET, MONTREAL

ALSO **KASTEL'S HOTEL**
ST. CATHERINE STREET, MONTREAL

PLATE F. 600

BRANCH OFFICES AND SHOWROOMS

TORONTO 119 KING STREET EAST	MONTREAL 155 NOTRE DAME WEST	WINNIPEG 76 82 LOMBARD ST
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Beaver Brand

Cast Iron Enamel Ware

Noted for Good Color, Durability and Attractiveness



The above cut shows our Wall Lavatory—artistic, sanitary and durable.

One of our leading sellers. Our splendidly equipped plant is producing an unbeatable range of enameled Bath Tubs, Slop Sinks, Kitchen Sinks, Laundry Tubs, Lavatories, Closets, etc., and our customers can be sure of satisfactory goods promptly shipped. A guarantee goes with all Beaver Brand Enameled Ware.

Amherst Foundry Co., Ltd., Amherst, N.S.

ONTARIO SALES AGENTS:

MONARCH BRASS MFG. CO., LTD., ¹⁷⁸⁻¹⁸⁰
^{Victoria Street,} TORONTO

MARITIME PROVINCES
All Jobbing Houses

MONTREAL, P.Q.
All Jobbing Houses

WINNIPEG, MAN.
E. B. Plewes, 1203 Lombard St.

VANCOUVER, B.C.
A. O. Campbell

A MAN WHO HAS GONE IN SWIMMING AND HAD HIS SHIRT-TAIL TIED never longs for the wild life of the savage, nor the costume of goose-pimples and a straw hat.

I'M
NYE
the Die
Man



He Knows What He Wants.

HE WANTS HIS SHIRT

You may not want your shirt, but if you are threading any pipe this hot weather, you want a Nye Die. You may not know you want it, but you do,—every man who is tugging and sweating and perspiring over the ordinary kind of Die wants a Nye Die.

And wanting a Nye Die is much more satisfactory than wanting some other things, because you can get a Nye Die on Ten Days' Free Trial, by simply dropping a postal card to the undersigned.

You don't need to cry for a Nye Dye like children do for Castoria, because it is within easy reach of all, guaranteed to do better and more work with less labor, lasts longer, and cuts easier than any other on the market.

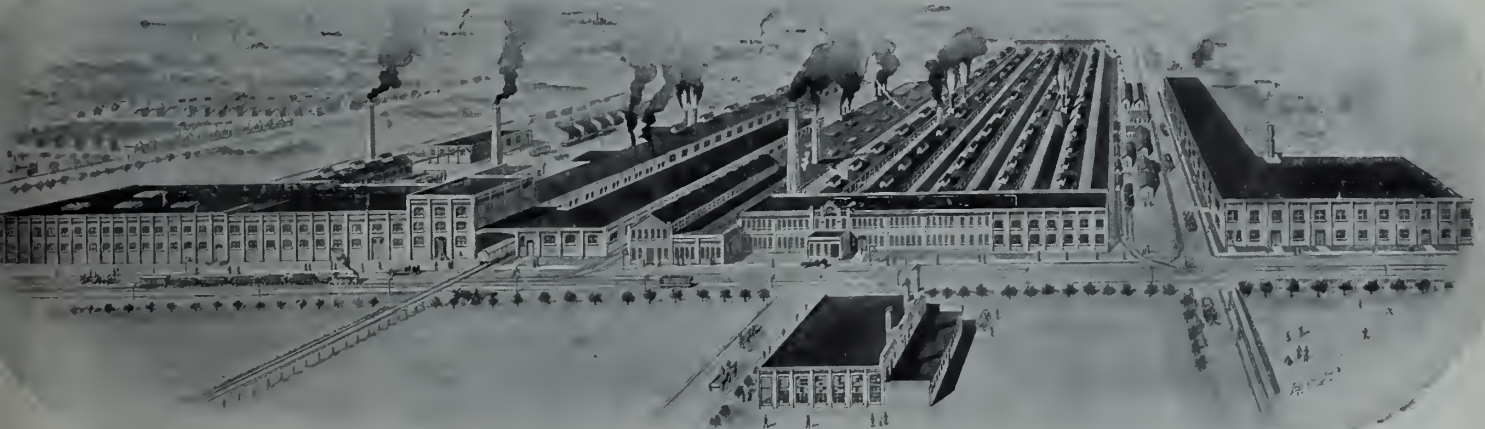
A one cent post postal card will get any size on Ten Days' Free Trial, and incidentally in remembering the "Maine," don't forget that Nye Die Stock, with the automatic bushing and its unusually large opening for the escapement of chips and oil, is the best stock ever put on the market. Sent on Ten Days' Free Trial to any dealer.

"NYE," the Die Man, Proprietor.

THE NYE TOOL AND MACHINE WORKS
124 NORTH JEFFERSON STREET, CHICAGO, ILL.

DO YOU WANT

to buy or sell anything, to engage a clerk or secure a situation? Try a Condensed Ad. in Plumber and Steamfitter, it will bring results. Two cents per word for first insertion one cent per word for each subsequent insertion. See page 22 for yearly rates.



Malleable and Cast-iron-pipe Fittings

MANUFACTURED BY

FITTINGS LIMITED

OTTAWA

WINNIPEG

MONTREAL

You can please your
customers and build
up business

by handling a real
quality line like the



Empire Closet

There are never any 'kicks' or repairs necessary once you have installed the "EMPIRE"—just solid satisfaction the year round. Tank is extra large, *giving a good flush*, and seat is special hard-wood and *will not split or crack*.

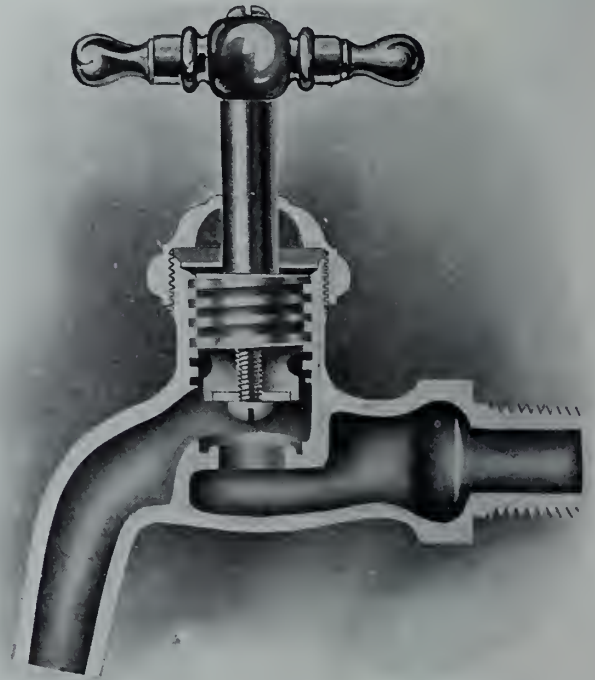
We make a full range of Plumbers' Supplies and Brass Goods.

Plumbers' orders shipped same date as received.

Write for details.

EMPIRE MFG. CO., Ltd.
LONDON, ONT.

If you have had trouble with Compression work---try our make. Many others are satisfied---Why not you?



Our name is on every piece we manufacture. "Any article of our make proving defective through inferior metal or improper workmanship, on our part, will be cheerfully replaced with two good ones at no charge to you."

The above is a strong GUARANTEE, but the QUALITY of our Goods warrants it.

Compare these "INSIDE POINTS" with any other Compression Work on the market:

1. Length of Shank
2. Number of Threads on Stem.
3. Depth of Stem Threads.
4. Incased Fibre Washer which prevents spreading.
5. Depth of Raised Seat.
6. Shape of Spout which prevents splashing.
7. Special Packing, making Unsanitary Stuffing Box unnecessary.

A trial shipment will prove the stability of our Goods and prove why we can make the above Guarantee to you.

Manufactured only by

Canadian Brass Co., Ltd.
Galt, Canada

Fig. I

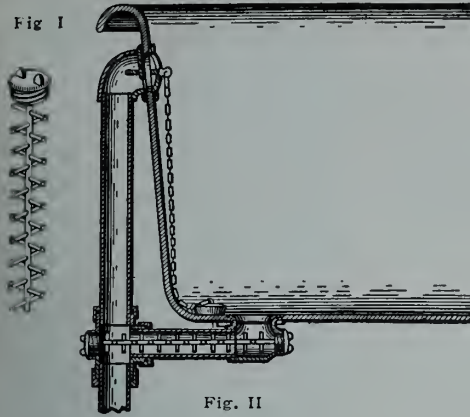


Fig. II

E.N.O. Patent Bath and Waste Overflow

SOMETHING NEW

Here is a Bath Waste and Overflow that can be thoroughly cleaned out from two outlets, viz: back of Bath or underneath. The Cleanout Rod, Fig. I, is made of aluminum, has a ball joint connection to the plug. All the fittings are of cast brass and heavily nickel plated. The whole is got up for use and will stand more abuse than any other Bath Waste in existence. Our patent can be used with any standard bath on the market.

SOLE CANADIAN MANUFACTURERS

Westport Mfg. & Plating Co., Limited
117½ BANK STREET, OTTAWA

USE A "RAPID" BATH HEATER ON YOUR NEXT JOB

It will pay you in future business and actual profit to install "Rapids." For perfect results, simplicity, economy and durability the "Rapid" stands second to none. Every Heater is absolutely guaranteed—it must make good or we will.

VENT or NON-VENT

Two types---both proven satisfactory by many years of use. 1911 finds many improvements in the "Rapid" line, among which is the bringing out of a new model that will be a winner for the Canadian trade.

IF YOUR JOBBER CANNOT SUPPLY YOU, WRITE DIRECT TO

RAPID HEATER COMPANY, GRAND RAPIDS, MICH., U.S.A.

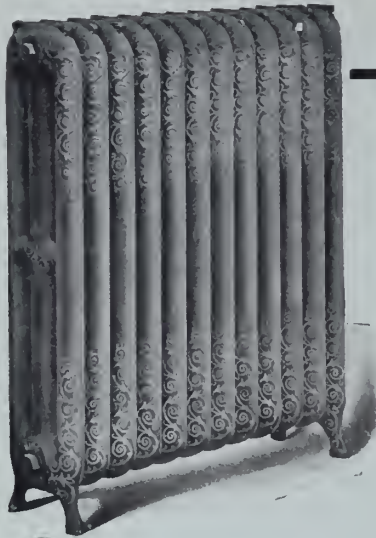
BOOKS FOR PLUMBERS AND STEAMFITTERS

Pertaining to Heating, Lighting, Plumbing and Ventilation. All Orders Payable in Advance.

American Steam & Hot Water Heating Practice	\$3 00	Heating & Ventilating Buildings.		Sanitation in the Modern Home.	
American Plumbing Practice	2 50	House Drainage and Sanitary Plumbing	50	By J. K. Allen	2 00
American Sanitary Plumbing. By J. J. Lawlor	2 00	House Heating by Steam & Hot Water. By C. B. Thompson...	3 00	Sizes of Flow & Return Steam Mains	50
Baldwin on Heating, or Hints to Steamfitters	2 50	Hot Water Heating, Steam & Gas Fitting, Acetylene Gas—How Generated and How Used. By J. J. Lawlor and Geo. T. Hanchett	2 00	Steamfitters' Computation and Price Book. By Dean	3 00
Contract & Estimate Record Book for Plumbers. By B. H. Jessup	1 50	Principles of Heating. By W. G. Snow	2 00	Steam & Gasfitters' Text Book..	5 00
Contract & Estimate Record Book for Plumbers (Pocket edition). By B. H. Jessup	50	Principles & Practice of Plumbing. By J. J. Cosgrove	3 00	Steam Heating for Buildings. By W. J. Baldwin	2 50
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Formulas & Tables for Heating. By J. H. Kinealy	1 00	Repair Kinks. By Martin L. Kaiser	50	Kitchen Boiler Connections	1 00
Furnace Heating. By W. G. Snow	1 50	Sanitary Engineering of Buildings. By W. P. Gerhard	5 00	Lighting by Acetylene Gas, Electric Furnace Generators & Burners. By W. E. Gibbs, M.E.	1 50
Fifty Plumbing Charts	25	Sanitary House Drainage; Its Principles & Practices. By T. E. Colman	2 40	Mechanical Drawing for Plumbers	1 50
Guide to Testing Plumbing. By J. K. Allen	25	Sanitary Plumbing & Drainage. By J. W. Hart	3 00	Modern Plumbing, Illustrated. By R. M. Starbuck	4 00
Hints to Plumbers on Joint Wiping, Pipe Bending & Lead Burning. By J. W. Hart	3 00			Modern Sanitary Plumbing, Steam & Hot Water Heating. By J. J. Lawlor	
				Notes on Heating & Ventilation. By J. R. Allen	2 00

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MacLean Publishing Co., 143-149 University Ave., Toronto



Drive these Tandem!

A splendid team that never fails to land the "Profit and Satisfaction Stakes." A combination well worth while for every plumber and steamfitter is the

KING BOILER AND RADIATOR

Apart from the skill and care we introduce into the molding, assembling and finishing of the "King Boiler" it has features which make irresistible selling points for the wideawake dealer.

The new shaking arrangement is the most effective yet introduced, and in conjunction with the modern "King" grate, dumps the ashes, all the ashes, and nothing but the ashes. The fire-pot is widely corrugated, providing a splendid air way at the sides of the fire, and insuring a greater and more rapid distribution of heat than is possible in any of the boilers.



All doors in the "King" Boiler are exceptionally wide, well-fitted and allow the work of cleaning to be carried out in a minimum of time. Flues and water sections are arranged so as to catch and distribute the maximum amount of heat in the easiest and most economical manner.

The "King" Radiator, made in two styles only, plain and ornamental, favorably known for many years, comes to you doubly tested and absolutely guaranteed.

The result is a modern heating apparatus that is without a peer and that you can handle and recommend with perfect confidence.

As an interested party, we cordially invite your enquiry. We are satisfied that our Boilers and Radiators have no superiors anywhere, and you do not obligate yourself in any way by asking us to prove our claims.

We carry a complete stock of the best known makers of Steamfitters' Supplies, including Lunkenheimer Valve.

Write for prices.

STEEL AND RADIATION, LIMITED

FRASER AVENUE

TORONTO, - CANADA

AGENTS

TORONTO SHOWROOMS:
80 ADELAIDE STREET EAST

MONTREAL SHOWROOMS AND
SALES OFFICE: 138 CRAIG ST. WEST
AGENCIES IN ALL THE LEADING CITIES.

Plumber and Steamfitter and Sanitary Engineer of Canada

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Circulating amongst Plumbers,
Steam., Hot Water and Gas Fit-
ters, Sanitary Inspectors, Heating and
Ventilating Engineers, City Engineers,
Boards of Health, Architects, etc.

TORONTO, APRIL 1, 1911

Every Ontario master plumber should make it a point to be present at the meeting on Good Friday in Toronto, called to organize a provincial association.

The strength and success of the National depends, to a great extent, on the existence of thriving associations in each province. Of late years this source of strength has been lacking. The officers of

ATTEND MEETING the National Association recognize
ON GOOD FRIDAY the necessity for action in this re-
spect and steps are being taken to

get the provinces into line. The first real step in that direction will be taken in Ontario, and it is therefore doubly important that the Good Friday meeting should be a pronounced success.

There is not the slightest doubt that master plumbers in all parts of the province are interested in the success of the movement, but in a great number of cases, the interest is of the passive and not the active variety. They are willing enough to join, and share in the benefits, but are quite prepared to leave the pioneer work to others.

It is hoped that this attitude of semi-indifference will be discarded and that enough master plumbers will put in an appearance to make the organization meeting a rousing success.

Make up your mind now that YOU will not be one of the absentees.

A Canadian to the fore again! Regina master plumber takes first prize in Honeywell contest, in competition with men from all over America.

In this issue the results of the letter-writing contest, inaugurated by the Honeywell Heating Specialty Co., Wabash, are announced.

Great interest was displayed in the contest, and replies were received from all parts of the United States and Canada. So many replies were received, and the quality was so high, that the judges had

THE HONEYWELL a hard time reaching a decision.
CONTEST RESULTS It took three days of arduous work to finally select the winners and, after perusing the prize essays, the conclusion is reached that the judges did their work well.

It is gratifying to note that first prize went to a Canadian, William Whiteford, of Whiteford Bros., Regina. His reply was indeed commendable, and showed that this Canadian firm has been doing business on a progressive

basis, and has merited the success attained. Other splendid replies were sent in by Canadian plumbers, evincing the wideawake spirit which prevails among members of the trade in this country. For the interest displayed in the contest throughout the Dominion, credit is due to Plumber and Steamfitter. The contest announcement and the conditions thereof were made known to the trade through advertisements and reading notices in this paper.

The success of the contest marks another stage in the growth of the Honeywell Co.

American hardwaremen are enrolling themselves in a new organization which they call the Hookworms of the World. All members of this order or crawlers obligate themselves never to do anything to-day that can be left off until to-morrow, never to go to bed until forced to do so by exhaustion, never to get up until compelled to do so by exhaustion, and a number of other "nevers" of a like nature. Some plumbers we know could qualify for membership.

That old chestnut, the discovery of a method to turn ashes back into coal again, has been resurrected for the 'steenth time. The invention differs only in a few details from others which have been announced at intervals during the last few years. You take an acid solution and pour it on the ashes, together with some salt. (Better

COAL TO ASHES
ASHES TO COAL

take the story with a pinch of the same.) Then let things mix up a while, and the ashes will be turned into a substance which

will burn again.

The method promises to bring unwonted prosperity to those who adopt it, and blue ruin to the coal men. It makes possible a sort of perpetual motion, coal to ashes, ashes to coal. You never have to buy more coal, but just keep on converting the ashes back into their original form and vice-versa. It's a great idea. It means that every ash barrel will become a veritable treasure trove, a fence-corner Cobalt.

But why not apply the same principle to other things? Should it not be possible to effect a similar resuscitation from the ashes of cigars? The man who invents a method to turn the residue of ash trays back into fragrant "weeds" will undoubtedly be hailed as a benefactor of his race. It will then be possible to smoke continuously without any expense, after the original stock is laid in. To paraphrase a well-known proverb, it will be a case

of "he who smokes and saves what's left, will never be of smokes bereft."

The idea, at any rate, is worth looking into.

Occasional advertising, as someone has said, is like a light rain. The good effects pass off and the old dryness sets in. But after a good steady shower, the sun comes out and the earth takes on a new freshness and beauty.

The plumber who is thinking of starting into the lighting fixture business, should lay in his stock now.

This is probably the best season of the year to make a start. Contracts are being placed for new buildings and plans are in course of preparation for others. The master plumber is called upon to figure on the plumbing and heating work. Why should he

TAKE UP THE NEW LINE NOW

not, at the same time, figure on the electric and gas fixtures?

As has been pointed out in previous issues, there is good profit in the fixture business. It does not require a large outlay to put in an initial stock; in fact, sufficient could be purchased for \$50 to begin in a modest way. The beginner is, therefore, not taking any rash risks.

The lighting department opens an avenue for new profits and should not be heedlessly passed by as a "new fad."

Many a man, like Uriah Heep, makes a pretence at being "Umble" and always speaks of himself as a "little fellow" in business. This is not dangerous in itself, but too many are willing to conduct their business on the assumption that it is small and 'umble; with the result that it always remains so.

Technical education would result in turning out more efficient men in all trades. There is no doubt on that score. At the same time, a man cannot become a thoroughly practical workman through the tuition alone that can be obtained in a manual or trade school. He needs the knowledge that is to be obtained only in the rough school of experience. He has to engage

PRACTICAL EXPERIENCE

in everyday work and tackle the problems which crop up regularly before he becomes thoroughly competent. In fact, it takes a course of training to learn how to apply properly the knowledge that can be obtained in a technical school.

The complaint has sometimes been heard that men who have never served a regular apprenticeship in a trade, but have picked up all their knowledge in schools, come out into the world and start in on the same basis as men of long experience. They frequently make a failure of it, and thus help to lower the status of the trade in which they have engaged.

Technical training would be an aid to boys and men bent on entering a trade. By that means, they could obtain a knowledge of the theory and the principles of the trade, which would serve them well when they started out in earnest, and would enable them to get farther ahead.

A subscriber writes that he has decided there are things more difficult than plumbing. He tried to take a photograph of his store window himself, to send to Plumber and Steamfitter, but only succeeded in getting a very life-like representation of a passing horse and rig.

The details of the vehicle were shown with wonderful exactitude but the window itself was a blank.

What is the life of a newspaper ad? That question may well be asked in view of the following incident. On Oct. 29, 1910, the Gurney Foundry Co. inserted the following notice in Plumber and Steamfitter:

SITUATION VACANT.

Wanted: First-class boiler and radiator salesman, who knows his business, for Western Canada. Splendid opportunity for right man. Box 1045.

As usual, there were a number of immediate replies, and one answer was actually received as late as Wednesday, March 29. At first it was thought a mistake had

THE LIFE OF ADVERTISEMENTS

been made in the number of the box, but it was found that the letter had really been written in response to the ad., which has ap-

peared in the Nov. 1 issue of the paper.

This demonstrates that the influence of an advertisement does not cease as soon as the next issue of the paper is out; it is a striking evidence of the fact that an advertisement continues to exert its power for indefinite periods, creating interest and stimulating business at the most unusual times, and in the most unexpected quarters.

We strongly suspect that the coal evolved from ashes would necessarily be "chestnut" coal.

* * *

If it were possible to turn ashes back into burnable substance, as rumor says it is, everyone would put in a steam heating plant.

* * *

Show that you are interested in the welfare of the trade by attending the organization meeting at Toronto on Good Friday.

* * *

Reports from all sections of the country point to uniform activity in the plumbing trade. Business prospects are exceptionally good.

* * *

Comfort stations are being planned in St. John, N.B. The time will come when all cities will have provided stations for the use of the public.

* * *

A comprehensive estimate places the "overhead expenses" on a \$20,000 a year business at 17 per cent. How many master plumbers are allowing that margin?

* * *

The Hookworms of the World agree never to go to bed until forced to do so by exhaustion. If they don't change this rule, the proverbial early bird will be getting a few of them.

* * *

Tin is a metal with a past but nothing in the whole course of its somewhat chequered career, can equal the way it has been going of late. Metal men agree that it is time, tin settled down to a more steady and sober gait.

* * *

In view of the fluctuations on the tin market, that old saying: "Off again, on again, gone again, Finnigan," might be changed to read: "Up again, down again, gone again is tin again." In extenuation, it might be pointed out that the pun on the last word is quite unintentional.

* * *

The objects of this new body of "Hookworms" may be very commendable but the name does not appeal very strongly. If the master plumbers ever organize a similar body, a good name would be the "Live Wires of the World."

Ontario Plumbers to Organize Association

A Good Attendance at Good Friday Meeting is Desired - Secretary
Le Grow of National Association Issues Letter to Members, Dealing
with many Problems - Preparations for Annual Convention.

THE master plumbers of Ontario meet on Good Friday in Toronto to organize a provincial association, and the presence on that day of everyone, interested in this commendable movement, is desired. It is understood that quite a number of master plumbers have signified their intention of being present. A number intend to come from long distances; in fact, a delegation is expected from the three towns in the "nugget belt" - Cobalt, Haileybury and New Liskeard. In consequence, it is expected that the meeting will be a rousing success and that the association will be organized on a sound and permanent basis.

R. J. Shannon, Toronto, the Ontario vice-president, has issued the following statement:

"At the close of our last convention in Toronto, it was decided to organize a provincial association in Ontario and the matter was left entirely in my hands, but stress of business and other matters have left me short of time. The date set was Good Friday, April 14, only two weeks away. As before stated, my time is limited and I am taking this medium to extend to every master plumber in Ontario a hearty welcome to attend this convention. Now don't stay away if it so happens that you are not notified in time. This is the time and place for all troubles to be threshed out and for a reunion of all the old members and new ones. We have got to stand shoulder to shoulder and organize our associations, and then we can accomplish something good. Again I extend a hearty welcome to all master plumbers in Ontario to attend our convention which opens at 21 Richmond St. West, at 10 a.m., Good Friday morning, April 14, 1911.

"Yours truly,

"ROBT. J. SHANNON."

PREPARING FOR THE CONVENTION.

In Port Arthur, they are already making plans for the annual convention of the National Association. They intend to make it the most successful convention ever held, out there in the "twin cities," and are planning an extensive advertising campaign to boom the attendance.

Master plumbers who attend can be sure of a royal welcome and a rousing good time.

With reference to the dates of the convention, some doubt exists as to whether it should be held during the last week in May or the first week in June. Secretary Le Grow has written to Port Arthur asking for the opinion of the members of the trade there. It is desired to fix the date to suit the convenience of plumbers in both west and east.

SECRETARY IS GATHERING INFORMATION.

Secretary Le Grow, of the National Association, has sent the following letter to master plumbers in all parts of the Dominion:

Dear Sir:

At a meeting of part of the Executive of the National Association Master Plumbers, held in Toronto, Feb. 9, 1911, we looked over the recommendations from the vice-president of Quebec, given at the last annual convention. He asked some few questions: first, the elimination of the general contractor so far as the technical plumbing

and heating trades are concerned; the revision of the official selling price-list for job work; the amalgamation with the builders' exchange; the study of existing conditions in order to ascertain the more efficient manner of conducting a plumbing business, special attention being given to the exact cost of running expenses and to the proper percentage to be added to insure a definite and tangible profit. We would like any information that you can give us on this line. Our personal recommendations are: first, that the elimination of the general contractor would be to the advantage of the plumbing and heating business in numerous manners; second, the revision of the official selling price-list, this might be a question that could easily be dealt with by the different local associations; third, we would recommend that the local associations deal with the question; fourth, I am enclosing you an accurate report of what it costs in Toronto to run a plumbing business up to \$20,000 a year. You will notice that the overhead expenses such as salaries, rent, etc., are a little over 17 per cent., but the letter will explain itself. What has been your experience in finding out the cost of your business? We have carefully gone over this in the Executive and submit this statement to your study and criticism.

Some pertinent questions: What is the reason that your association is in a rut? If it is not in a rut, give us some information how you came out of it. Did your association succeed in past years? If so, why not now when the prosperity of the country, particularly in the plumbing work, has never been equalled, when the public is demanding a higher standard of sanitary arrangements and more intelligent application from the plumbers to their business?

You will hear from us again shortly with some more information along this same line.

Respectfully yours,

LEWIS LEGROW,

Secretary.

TRADING ACCOUNT.

Jan. 31, '10	Stock on Hand	\$ 2,200.00
Jan. 31, '11	Mdse. Purchases	9,588.59
	Wages	4,587.37
		\$16,375.96
Jan. 31, '11	Less amount of Stock now on hand ...	1,340.70
		\$15,035.26
	Gross Profit	4,299.17
Jan. 31, '11	Amount of Sales	\$19,334.43
		\$19,334.43
	Salaries, Bookkeeper	\$ 550.00
	General Expenses, including Rent, Telephone, Cartage, Printing, Postage, Light, Heat, etc.	749.58
	Proprietor's Wages	2,212.97
	Discounts Allowed	59.46
		\$3,572.01
	Net Profit	1,006.73
		\$4,578.74
	Gross Profits, as above set out	\$ 4,229.17
	Amount received on bad debts	55.20
	Discounts Saved	224.37
		\$4,578.74
	On \$19,334.43 of Business the Expenses are	\$3,572.01
		3572.01×100
	On \$100.00 of Business the Expenses are	=17.03%
		19334.43
	A slight fraction over 17% on \$100.00.	

Value of a Well-Kept Shop and a Neat Store Front

Business Can be Gained by This Means—What Some Men Are Doing to Improve Their Premises—Toronto Firm Doubling Capacity—Two Commendable Window Displays of Plumbing Goods.

The value of a good store and a good store front is not always appreciated by the master plumber. Many, otherwise progressive, men are quite willing to do business in antiquated, crowded little cubby holes which pass by courtesy for shops. They do not pretend to keep their stock in attractive form or to display it to advantage.

These men are losing daily by their shortsighted policy. Their business may continue good and it may, therefore, seem hard to pick out just where the losses occur, but the fact remains that they are losing. For one thing, the development of the business will be checked. The opposition concern, around the corner, which has branched out and boasts of a handsome and capacious showroom, will soon grow beyond the limit of the other.

It is gratifying to note that there is a marked tendency on the part of the trade to improve the shop standard. Firms are moving into new and larger quarters, plate glass fronts are being put in and commodious showrooms are being laid out. Plumber and Steamfitter has published descriptions, and given illustrations, of many new plumbing establishments recently which have



A View of the Present Store of A. Welch & Son, Taken from the Rear—The Floor Space will be Doubled After April 1.

shown the progress being made in these directions.

A. Welch & Son, Queen Street West, Toronto, plumbers, tinsmiths and deal-

ers in stoves, are making a change in their already extensive establishment, which will double the capacity of their store. The adjoining store is being tak-



Plumbing Goods Shown in Window of Boyle & Son, Napanee.

en in and the whole will be thrown into one large showroom, chiefly for the display of stoves. The front will be made into one window, which will be 35 feet wide, thus giving ample scope for very effective window displays.

The Shop Window.

The plumbing shop window is perhaps more neglected than the interior of the shop. Many plumbers who keep a neat

"I have always found," declared a prosperous master plumber, the other day, "that I have been well repaid for the time that I devote to arranging my window and keeping the shop neat and clean. When people pass my shop, they invariably glance in; often they stop and glance over the stock shown in the window. Time after time, I have had customers tell me that they wanted me to do their work, because they felt I would make a creditable job of it. They judged by the kind of shop I kept."

This can be accepted, not as an isolated case, but as evidence of what is to be expected in all cases. A well-kept shop and an attractive window will help to get business every time.

KING BOILER ON MARKET.

Among the new features of the King boiler is a special design of the combustion chambers and water-ways which guarantees a maximum amount of heat from a minimum fuel consumption. One of the most important features, however, is the shaking and dumping grate, which is operated by a handle in front, as indicated on accompanying cut. The handle is always in position, and no stooping is necessary to shake it. To dump the grates the handle is reversed.

Another important feature is the absence of bolts or pins in attaching the connecting bar to the grates, consequently it is a comparatively simple

matter to make repairs, when any part needs replacing.

The fire pot is corrugated, thereby greatly increasing the surface area on which the fire acts. Thinner water-ways have been provided, thereby increasing



the circulation. The openings from the fire pot and from the section to the water-post are made larger, thus decreasing resistance and friction and allowing freer circulation.

The boiler is being made in half sizes, so that it will be possible to order closely to actual requirements.



ALBERT WELCH.

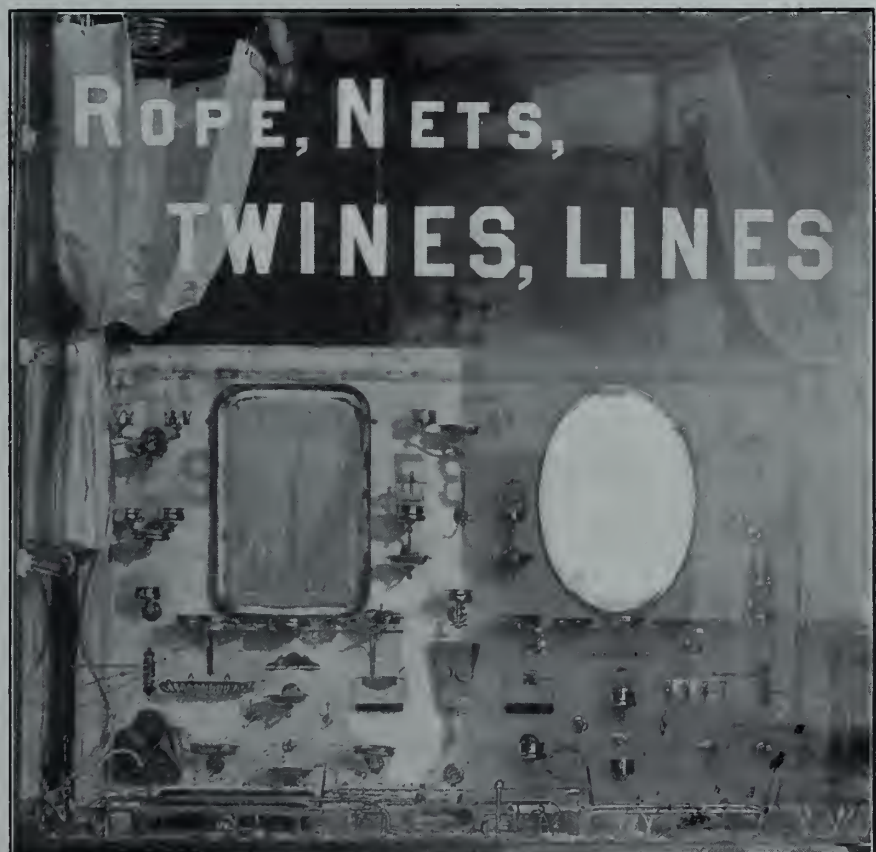
stock, neglect to do anything in the way of a window display. They are, by so doing, neglecting a chance to effectively advertise their business.

An illustration is herewith shown of a window in the magnificent new store at St. John, N.B., of W. H. Thorne & Co. The space is not large but excellent use has been made of every square inch and the result is a very neat and creditable display.

Unfortunately, the photographer had some difficulty as the picture was taken in full daylight. Objects on the other side of the street were reflected with considerable accuracy on the plate.

The other window display was shown in the store of Boyle & Son, Napanee, plumbers and dealers in hardware. More space was at the disposal of the window dressers in this case and they were able to show a complete bathroom outfit. Every detail was carried out with minute precision. Linoleum and a bath mat were placed on the floor and green burlap was used on the walls. The tub was enamelled both inside and out and that it shone most handsomely is shown by the fact that, even in the photograph, the reflection of the floor can be seen most clearly on the outside of the tub.

This very commendable window display was devised by Mr. De Groff, who has charge of the plumbing end of the business, and Harry Boyle. They put much care and time into it and have every reason to feel satisfied with the result of their efforts.



Display of Bathroom Accessories in New Store of W. H. Thorne & Co., St. John, N.B.



The Question Box



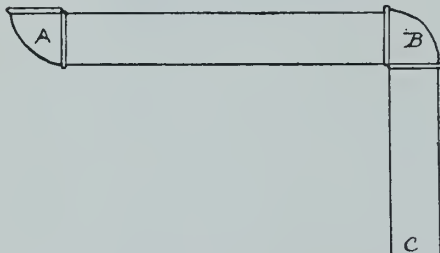
Subscribers are Urged to Send Questions to be Answered, or to Comment on Letters Published. Descriptions of Jobs Done or Shop Kinks are Also Invited.

SIMPLE PIPE MEASUREMENT.

Editor Plumber and Steamfitter.—Will you be kind enough to give me an idea of what the terms "end to centre" and "centre to centre" mean when applied to pipe measuring? Beginner.

Toronto, March 25.

These terms of measurement are generally designated as "C.C." and "E.C." respectively, and for the benefit of the correspondent we have had a small sketch drawn showing same. In the sketch the distance from points "A" to point "B" would be the centre to centre



Simple Drawing Showing Measurements.

measurement; while the one from "B" to "C" would be an end to centre measurement. Point "C" might be the centre of a union or the extreme end of an "ell" but we have shown it as simply the end of the pipe. In measuring one must be careful not to take the apparent centre of the "ell" for the real centre, for it is not as may be found by prolonging the lines that might be drawn through the centre of the pipe horizontally. It will then be seen that the centre measurement should be taken from a point somewhat beyond the centre of the "ell," as it is built. This is one reason why some journeymen never have their measurements come out true, as they always seem to go wrong somehow.—D.C.H.

ALTITUDE GAUGE REGISTERS INCORRECTLY.

Editor Plumber and Steamfitter.—Have had a pressure appliance put on my hot water heating job and since so doing the altitude gauge seems to cut queer capers as it shows more feet of water than I am sure that there is in the system. Can you tell me the reason? "Gauge."

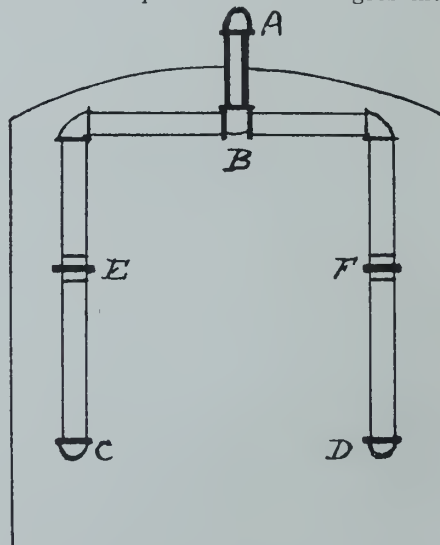
Brandon, March 21.

From your description and from the fact that the pressure appliance was ap-

plied to the system after the job had been run for some time, we conclude that the position of the altitude gauge was left unchanged. In such a case, any additional pressure given by the appliance would be shown on the altitude gauge and hence the manner in which it acts. If the gauge be placed at some point between the appliance and the tank, it will then give the height as it had done previously.—D.C.H.

AN EQUALIZER FOR THE BOILER.

Editor Plumber and Steamfitter.—Some time ago I was called to doctor up a steam job where the boiler lifted the water into the mains and I concluded that the job wanted an "equalizer" and so I put one on after the manner shown in the sketch which I enclose. I presume that the connection might have been made somewhat differently, but such as it is I send to you. The "ell" at point "A" was at the end of a pipe from a "tee" just out of the riser from the boiler. The pipe from "A" to "B" was one size larger than all the rest of the pipes shown at the back of the boiler. Points "C" and "D" are where the equalizer turns and goes into



Drawing Showing Equalizer Connections at Back of Boilers.

the lower part of the boiler. I put unions at points "E" and "F" but if I had it to do again I would put the unions somewhere above the water line of the boiler. After we got the job done,

we fired up the plant and the boiler did not lift the water into the mains any more.

C. J. C.

Montreal, March 16.

TURNING COUPLING INTO BUSHING.

Editor Plumber and Steamfitter.—I have at some time seen an account of how to make an emergency bushing out of an ordinary pipe coupling and if your man who attends to the questions and answers can tell me, I would be very much obliged for the information.

Toronto, March 9.

T. B.

An adjustable set of dies are necessary in order to do the task in an easy manner. The coupling must be screwed on to the pipe so far that it will not turn on farther when the thread is being cut on the outside of said coupling. Pick out as true a coupling as you can find and one that is very strong. In going over the coupling the first time with the dies, set them so as to cut a very shallow thread, as the coupling is not true and will have to be pared down, so to speak, before you can get the full effect of the dies. It will be necessary, in all probability, to go over the coupling three or perhaps four times before the thread comes to the standard. After the thread is properly cut, the dies can be thrown off and the coupling removed from the pipe. In case that one desires to make an extra smooth looking job out of the affair a hack saw may be used on the coupling, cutting it down until it remains only flush with the face of the fitting into which it may be placed, thus remaining practically out of sight. The writer has made use of this device many times at a pinch and found that it was well worth while to know the same.—D.C.H.

FOUNDATION DEPENDING ON THE CONTRACT.

Editor Plumber and Steamfitter.—When a contractor puts in a heating job and it is necessary for a foundation to be made for the boiler to be set on is the contractor obliged to furnish such a foundation? H. G.

Brantford, March 9.

This is a matter that should be embodied in the contract between the owner and the party who has taken the

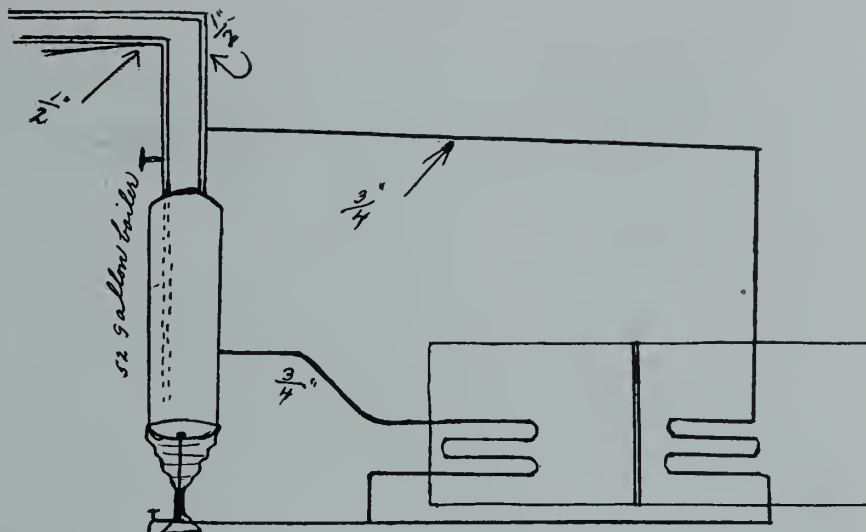
job to do. Many fitters prefer to furnish the foundation themselves and make their estimates accordingly when they are figuring on the job. It is not a matter for splitting hairs any way, for such a foundation for the ordinary house heating boiler can be laid in about three jerks of a lamb's tail if one only goes at it with a will and in the right manner. We sure would not let a small matter like that make any unpleasant feelings between ourselves and the owner, if we had been careless enough to take the job without any understanding beforehand in the matter.—D.C.H.

ERECTING BOX COIL.

Editor Plumber and Steamfitter. — Enclosed find sketch, could you give me an idea of the simplest means of erecting a pipe box coil in circular window of 17 ft. radius? I should be glad of any hints on this subject. C. S.

Montreal, Dec. 29, 1910.

As per the ordinary practice, it would be well nigh impossible to lay out the coil on a curve for the simple reason that it would be a very difficult matter



will greatly oblige with this favor, as it is a puzzle to me.

Yours sincerely,

An Interested Subscriber.

Vancouver, March 13.

It seems to us that the correspondent has eliminated most all that could happen to the installation except two things

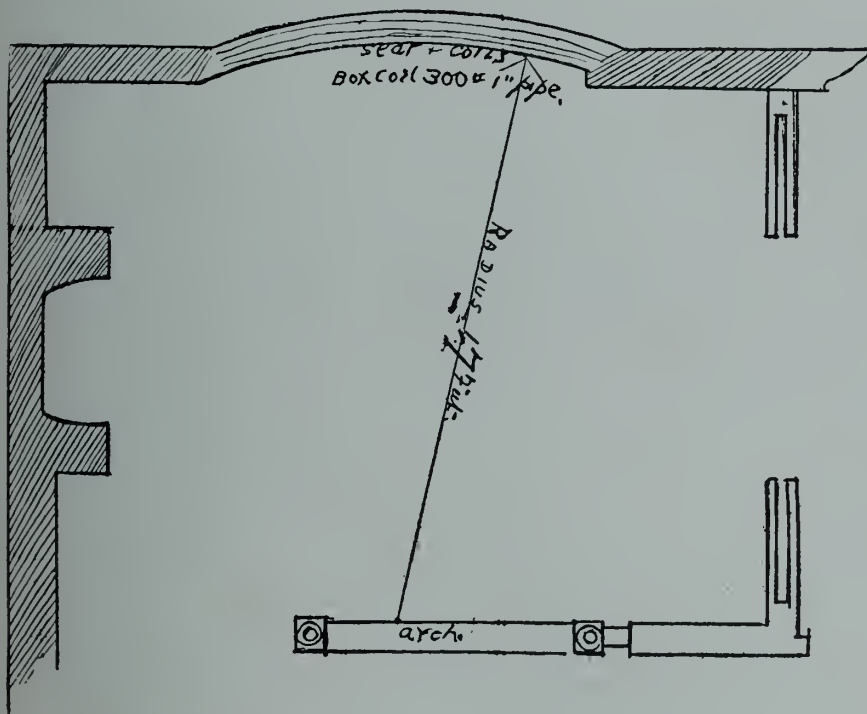
have been put in unrimmed, as is many times the case, the size on the inside is reduced to about one-quarter of an inch at every point where a cut has been made. Such being the case, with a good fire and an ordinary working water works pressure, we would not be surprised that the noise should happen when the water was drawn as we have seen several cases of this same nature. The 1/2-in. pipe is too small and should not be used as a main after the manner that the writer has shown the lines starting out to serve the system.—D.C.H.

Heating System in London.

Hamilton & Stott have completed the underground steam heating plant for the Helena Costume Co., London, Ont. This company is a private concern and is now heating twenty-four buildings from the exhaust steam of their plant. One of the largest stores in London, that of Messrs. Smallman & Ingram, is being heated from this plant and is giving entire satisfaction. This underground plant is the same as the St. Thomas city heating system, the steam pipe being enclosed in a glazed tile and filled with asbestos sponge. Hamilton & Stott have also received a contract for heating with hot water the residence of C. D. Burdick, London, Ont.

System Not Paying.

A firm of consulting steam heating engineers, of Buffalo, New York, examined the St. Thomas municipal system of steam heating, and reported that there was much lacking to place the utility on a self-sustaining basis and at a reasonable price to the consumers. The chief fault was that the boilers at the central station needed some important repairs, and the condensed steam when it had fulfilled its use, instead of being emptied into the sewer, should be returned to the boiler again, a saving in water and heat would be effected.



to bend the pipes so that they would line up with any degree of regularity.—D.C.H.

Editor Plumber and Steamfitter. — In your next issue, would you kindly advise me why there is a rumbling noise in the boiler when the cold water tap is turned on at the sink. I might say that it is a restaurant range, connected up, in two fireplaces, as you will see by the accompanying sketch. I may also advise that there are no pipes trapped nor any washers loose on the taps. You

and those would be on the way in which the job was "hooked up" and the pipe sizes. As he has stated nothing about there being a deficiency of hot water nor a pounding when there was no water drawn we must assume that that part of the job is all right. In looking over the sketch, we notice that the connections from the coils to the range boiler are three-quarter inch pipes; while from the boiler to the various fixtures (whatever they may be) we see that the pipes have been reduced to one-half inch in size. Now, if these one-half inch pipes



Mr. J. H. Fenton,
Cedar Rapids, Iowa

Mr. John T. Sadler,
Elmira, New York

Mr. A. W. Gardner,
Montreal, Canada

Judges in the Honeywell Prize Letter Contest

We produce herewith a photograph of the gentlemen who acted as judges in the prize letter contest which we advertised extensively in the trade papers and by mail direct from January 1st to 15th, 1911. We wish to call particular attention to the high character of the judges in this contest. We exercised the greatest care in making our selection and believe that no one in the trade will question the integrity and standing of the gentlemen who so kindly consented to serve. They are all prominent and well known heating contractors and have a personal acquaintance with a large per cent of the heating trade throughout the country.

Mr. J. H. Fenton of Cedar Rapids, Iowa, has been engaged in the heating business since 1874, having learned his trade in Waterbury, Conn., afterwards moving to Iowa. He has been in the heating business in Cedar Rapids for the past eleven years and maintains one of the best equipped shops in the west.

Mr. John T. Sadler of Elmira, N. Y., is so well known throughout the country that an introduction is scarcely necessary. He has long been in the heating business at Elmira and has been actively identified with the National Association of Master Steam and Hot Water Fitters for many years, serving at one time as its President and being at the present time one of its Directors.

Mr. A. W. Gardner, of the firm of Gardner Brothers, is a prominent fitter of Montreal, Canada; his firm, composed of J. H. Gardner and himself, being among the best

known in the Dominion. As hot water heating is very largely used in Canada, Mr. Gardner by his experience was well qualified to serve as one of the judges.

As a result of our advertising hundreds of letters were received from the trade. All letters received up to noon, February 15th, were turned over to the judges when they met at our office Tuesday morning, February 21st, 1911.

Our only instructions to the judges were that they should carefully read and consider every letter submitted and to base their decisions on letters furnishing unquestionable proof of the superiority of the Honeywell method of hot water heating and appliances.

The judges were in session for three days, and on account of the many excellent letters received their task was found to be a most difficult one.

We want to take this occasion to thank the trade for the very liberal response to our request for letters, evidencing the widespread interest and the loyalty of the trade in general to Honeywell hot water heating. As promised in our advertisements, all who submitted letters in this contest will be favored with a souvenir of the occasion and these are now being mailed out.

We will shortly publish in booklet form a large number of the letters received which will furnish valuable advertising matter for the trade in interesting prospective customers in the Honeywell System.

Yours very truly,

Honeywell Heating Specialty Company,
Wabash, Indiana

THE WINNING LETTERS

1st Prize Letter

The Honeywell Heating Specialty Co., Wabash, Ind.

WHITEFORD BROS., 2225 South Railway St.

REGINA, SASKATCHEWAN, CANADA, January 12th, 1911.

Gentlemen:—It is three years since we first got into touch with the Honeywell Heat Generator. In carefully studying the construction of the device, in your advertisements, we were impressed with the idea, that in this was the solution to a long felt want, and we decided to try it when the first opportunity presented itself. For a time we were unsuccessful. Because of its being a new thing, our patrons were reluctant to risk such an essential item as the heating of their new residence to any device which had not been tried and proved. We however, persisted in our endeavors, our faith in the device growing all the while, although we had not yet actually seen the device, and had only your advertisements to guide and prompt us.

We were however, now determined to have a trial of hot water heating by accelerated pressure, when by good luck a patron came along who had sufficiently broad views to permit us of persuading him. This gentleman, Mr. A. J. Gibson, Real Estate Agent, Regina, was building for himself a new frame residence, and we were awarded the contract to heat it by the Honeywell method of hot water heating. We immediately despatched a set of plans of this house to you, for the purpose of having the piping plans laid off. This we consider, was a wise move on our part, as we now feel sure that had we trusted to our own judgment in this respect, our success with the Honeywell Generator would not have been what it is today. We will here digress to state a little incident which took place during the execution of this contract. The partner of one of our opposition firms, happened by chance to be an intimate friend of our patron and customer. This gentleman, although an opponent in business, is a competent steamfitter, and a man whose opinion on heating matters we hold a high opinion of. He was invited to look over the new residence of his friend and we were informed later by our customer that he used the following remarks: "You have a fine house here, Gibson, but I want to tell you that you will never heat this house with that plant. The pipes are altogether too small." Our customer was not daunted, he had listened to our arguments and had been convinced. We completed our contract and our first job was an undoubted success. Mr. Gibson has frequently since then stated to us, that if any of our customers are reluctant to adopt the new method of heating, he wants to talk to them and dispel all doubts from their minds; and more than one job has since come our way through the instrumentality of this gentleman, who by the way, told the writer yesterday that with temperatures ranging from 25 to 40° below zero at present, and while many are finding it hard to keep warm while burning Pennsylvania hard coal at \$12.50 per short ton, he is getting all the heat he wants, burning native Lignite at \$4.50 per ton.

To enumerate all of our pleasant experiences, (and we had no other), resulting from the installing of heating plants by the "Honeywell Method," would be too long a talk. Suffice to say, that during the following season we were successful in getting Generators installed on about one of every two jobs we did, and while during the season just closed we have installed ten hot water plants in residences here, we are glad to state that without exception we have installed a Honeywell Generator in every one of them, and there is not today in this city a dissatisfied customer using your method of heating. Until recently we had a monopoly of the use of the Honeywell Generator here, but its fame is getting too widespread for this now. Its critics of the past are now becoming your patrons, so that our loss is your gain, but since the community at large will be the better for this, we hope soon to see a Generator installed in every plant here.

The writer installed in his own home last season, a small heating plant. It is a six-roomed cottage. In this plant he has had time to study the effects of the Generator on the system, and the results attained by him in this plant leaves no room for doubt as to the efficiency of this method of heating. The boiler used here is of rather an obsolete type and none too efficient. We will only say of it however, what an old Scotchman said once to the writer: "Lad," he said, "you should never look in the teeth of a horse which is given you." It is in size about equivalent to what is known as a No. 3 boiler. As for rating, we doubt if it ever had any. The draught through want of height of the chimney, is poor, and we cannot on this account burn hard coal. The frame construction is poor, and the radiation is on the principle of 1 to 2 of glass, 1 to 200 of cube and 10% of exposed wall. A No. 1 Honeywell Heat Generator is attached to one of the returns behind the boiler, and a ¾ in. pipe taken from this to the expansion tank, which is not quite 13 feet above the top of the boiler. Recently when the temperature outside was 42° below zero and a fair wind blowing, we had no difficulty in keeping the temperature within the house at 70° F. We have not yet succeeded in boiling the water in this system, that is to say, we have never had the tank overflow, through the system boiling, a thing that certainly would happen frequently were the system open to the tank instead of being sealed by the mercury in the Generator. We will here however, state a fact which to the fitter who has not yet tried the Honeywell Generator, will appear to be overstated, but to which many who have studied and used it will testify—that during the period referred to, and at frequent intervals, this little plant is working with an efficiency equal to steam heating, the water at the boiler frequently being above 240° temperature and even in the radiators this temperature is attained, as the writer frequently opens the pet cocks to find steam and not water being emitted from them, yet there is no hammering noise as of water boiling in the system, the only sound being a gurgling caused occasionally by the rapid circulation of the water. On the other hand, during the milder days of October and November, when the temperature outside was between 10 and 25° above, the little plant worked for days with but little attention, giving off a very mild heat from the radiators, just sufficient to bring the temperature up to the desired 65 to 70°.

The question of efficiency is one which leaves no room for doubt. We are of the opinion that if 15 to 20% were deducted from the radiation, by this method as against the old open tank method, especially where the rules laid down by you as to piping, are followed closely, that the results attained would be in favor of the Honeywell method. We do not however contend that it is absolutely necessary to adhere to the rules of piping as laid down by you, to attain good results. We have here a case in which through an alteration being made in the location of an attic radiator after the piping had all been roughed in and concealed, we were obliged to tap a ¾ in. feed and return, which was feeding two radiators on the first floor of a residence, and taking from these a ½ in. feed and return to the attic. In this case the ¾ in. feed and return risers are carrying 72 feet of radiation on the first floor and 56 feet in the attic, and all are heating perfectly. Now, had this been an open tank plant, the risers to the first floor would have been at least 1½ in., while the riser to the attic would have been 1 in. and taken all the way from the basement. We have found from experience that it is necessary to at least keep fairly close to your method of taking off branches, that we can take liberties with the sizes of piping, and reduce these to a smaller size than you specify, and attain results better than could be got by the open tank method. Regularity of flow is a feature of the Honeywell method. We do not know of a single instance in which the flow was not exactly similar all over. This feature alone should make the Generator worthy of its place on any heating plant.

As to installing Generators on old plants, we have installed but one and this has made a marked improvement. The Union Bank is a three-story brick building and it has installed there a plant which to say the least of it is a credit to the firm who put it in. The boiler is a No. 9 Daisy, the piping is well installed and the radiation sufficient, but the draughts are very poor. This is accountable by a mistake in the construction. There are two 9x9 in. flues divided by one brick in the center. To make this good would involve tearing out the chimney and rebuilding it, which the owners are reluctant to do. We were asked as to whether we could do anything to make this plant deliver hot water in the radiators on the second and third floors, where it could not be formerly got, through sluggish circulation. We put a No. 2 Honeywell Generator on the plant and it has completely revolutionized it; on all floors sufficient hot water is got to heat the rooms to the desired temperature, and the Bank Manager, Mr. Carter, who occupies the upper floors, states that he is thoroughly satisfied with his plant. The draughts from the boiler are carried across the basement to the brick chimney by a 12 in. iron pipe, and in the brick chimney the draught is divided and carried up in two 9 in. flues, which have the center partition removed for about two feet up from the thimble, where the iron smoke pipe enters. Prior to our installing the Generator on the plant, it would not heat sufficiently above the ground floor. Now it delivers considerably more heat on the ground floor and there is no apparent depreciation in any radiator throughout the building, all heating as efficiently as the ground-floor radiators.

As to cost of installing, there is considerable saving here. In labor there is 20% at least. Our method is to put a fitter and helper to place the boiler and run the horizontal mains in the basement, but in running risers there is no need for two men; these are never over 1 in. and oftener ¾ in. or ½ in., as in the case of nearly all attic radiators. One good fitter can do more work running these risers than can be accomplished by two on the larger pipe method, while the saving in the cost of pipe and fittings is considerable. In a residence with 600 feet of radiation, the cost of the Generator is about half the amount saved in the cost of piping, fittings and valves, whereas there is a saving of 10% of the radiation, and the actual labor saved of 20% places the user of the Honeywell Generator so far below his competitor who does not use this method, in costs, that he can afford to estimate at least 15% less for a job and make as much off it as would the other fellow.

Rapid response to firing is a feature of the Honeywell method. Within a few minutes of firing a new plant, heat is felt in the radiators. This is accountable by the reduced quantity of water in the system, and to the mercury seal accelerating the flow. As to economy of coal consumption, here again the Honeywell method is an undoubted winner. The rapid transmission of the water undoubtedly carries a larger percentage of heat units to the radiators than is possible by any other method of hot water heating. We however feel as doubtless many steamfitters do, that we do not desire to say much on this question, as being the man in the street to whom the manufacturers' advertisements are directed, we feel that the limit will soon be reached in the coal saving line, every new device which comes on the market for the steamfitter's use being a coal saver.

In conclusion, we will say that here in this northern latitude and in an open prairie country, subject to rapid changes of temperature, ranging down to 50° below, with varying winds, we have had an opportunity of testing the "Honeywell Method" of hot water heating and our results with it have been gratifying to ourselves and our customers, and we are now confirmed adherents to it, preferring to leave the old style job to others. We intend in the future to do as we have done during the past year, confine all our doings in hot water heating to the Honeywell method.

Yours truly,

WM. WHITEFORD.

THE WINNING LETTERS

2nd Prize Letter

The Honeywell Heating Specialty Co., Wabash, Ind.
Gentlemen:—

F. F. HITCHCOCK,

WOODBURY, CONN., February 7th, 1911.

Why does a traveling man today use the railroad instead of going horseback?
Why does a business man use a telephone?
Why does a farmer use a plow instead of a spade?
Why does our ocean liner use an engine instead of a sail?
These questions and many more of the same nature seem ludicrous, and to me, who has not installed a single Hot Water Heating System in the last two years without a Honeywell Generator (and I will gladly refer anyone to the users of eleven installed during that time), would seem almost as ludicrous the question,

Why does an intelligent Hot Water Heating contractor advocate the Honeywell System instead of the old style, large pipe, slow circulating, gravity system?

The answer of course is the same in each case, namely:—"BECAUSE IT IS THE MOST EFFICIENT METHOD TODAY OF ACCOMPLISHING THE DESIRED RESULTS."

The Hot Water Heating contractor who knows that one gallon of water can be warmed by the same heater more quickly than two gallons; that the greater the pressure the more rapid the circulation and the higher the boiling point; that the cardinal feature to strive for in installing a Hot Water Heating apparatus is to have the water enter all the radiators simultaneously at as nearly as possible the same temperature at which it leaves the heater; and who has looked into the Honeywell System and finds, in addition to the accomplishment of these features of less water to be heated, greater pressure in the system, and more simultaneously heated radiators, and their consequent economy in fuel to the user, that it can be installed at a less price;—that contractor, if he is conscientious, is advocating the Honeywell System.

The contractor who does not understand these fundamental principles does not understand his business and will probably not even look into the Honeywell System until required to by an architect or a house owner.

In my opinion, based upon more than thirty years of practical experience in the Plumbing and Heating business, THE GRATEST IMPROVEMENT IN HOT WATER HEATING SINCE ITS ORIGIN IS THE HONEYWELL GENERATOR.

The Unique Valves are certainly true to their name. Any pipe fitter who can see through a hole in the fence must certainly be able to understand their merits at almost a glance, and I have yet to find a customer who does not pronounce them much neater in appearance than the old style Valve and Union Elbow.

This is an age of rapid advancement in all lines. Aside from the material profit afforded me by using the Honeywell products, it is a pleasure to feel that I am keeping step with the pace.

Very respectfully yours, F. F. HITCHCOCK.

3rd Prize Letter

ALBERTSON & YOUNG CO.

2025 Atlantic Ave.

ATLANTIC CITY, N. J., February 14th, 1911.

The Honeywell Heating Specialty Co., Wabash, Ind.
Gentlemen:—

Not with any expectation of winning a prize do I wish to add my testimony to what you will receive, but a souvenir will at least remind one of literary efforts.

It has been some little over one year ago that we became interested in the reducing of cost of installation for hot water heating. After various experiments along this line we adopted a Honeywell Generator for one plant. This was installed without any previous experience with them and the results more than met our expectations. Our radiation was reduced 20% from the regular quantity, the piping we reduced at least 15% to 18%, using no valves larger than $\frac{3}{4}$ in. when heretofore we had used 1 in. and $1\frac{1}{4}$ in. The results obtained with $\frac{1}{2}$ in. valves was a complete surprise. After installing this plant we recommended the same system in several places, and succeeded in getting the Honeywell installed, since then we have used 20 to 25 Generators and in no instance have they failed us. While it is true that the natural circulation of a liquid is due to the difference in specific gravity between two columns of the same liquid, due to the application of heat, yet it seems from our observations that there is a more rapid movement when the liquid is under pressure. This may be due to the molecules of the liquid being more closely pressed together and therefore transmit the heat from one to another with more rapidity. A great advantage of the Honeywell Generator over the open system is the fact that you can carry a temperature greatly in excess of the boiling point without the system boiling over. We all know that after a temperature of 212° is reached, the water will rapidly go into steam if left open to the atmosphere, but when a closed system is employed, this temperature can be greatly increased. Heretofore a closed system was condemned, and justly so, as being dangerous, owing to the liability of safety devices becoming stuck and at a critical moment, refusing to act, thereby causing destruction to surrounding property and at times death by scalding to those with whom the highly heated water came in contact. These disastrous results are entirely overcome by the use of the Honeywell Generator; in it there is absolutely no danger of corrosion in any way, due to the mercury seal.

A few words here may not be amiss regarding the heart and soul of a Honeywell Generator. Mercury is a silver white metal remaining liquid above 39° below zero F. It has a high boiling point 662° F. and low specific heat (.033), it has a high specific gravity (13.54) and owing to this a column of mercury 29.9 in. will balance or counterpoise the atmospheric pressure 14.7 lbs. It has a property of not adhering to the sides of solids and it does not form an amalgam with iron and can therefore be used for this purpose with perfect safety. The high specific gravity makes a perfect non-corrosive safety valve ready at all times to operate when called upon by the expansion of the water in the system.

Regarding plants which have been installed by the old orthodox method, and have not given satisfaction, there are numerous cases where installing a Honeywell Generator alone, without any other change in the plant, has been the means of making the plant perfectly satisfactory. By this I do not mean to say that the Honeywell Generator is a panacea for all the ills which are liable to beset a heating plant. With the advent of your mercury sealed Generator the first real practical knowledge of small mains, small risers and small valves was disseminated. These had been tried and experimented upon in a desultory, disconnected manner by various parties at different times and widely separated points; there was no real literature bearing directly upon this subject until your Generator was introduced. This, through the experiments of the Honeywell Heating Specialty Co. was rapidly developed and so became a prominent issue in hot water heating. This can be readily verified by an examination of the records showing the number that have been sold in the last year. The economy in the consumption of coal by the adoption of the Generator has been disputed by quite a number of fitters within the writer's personal knowledge. This I believe, is largely due to a lack of investigation on their part. Now take for example, a system containing 500 gallons of water in the mains. If the work can be accomplished with a reduction of 50% of this amount of water, the result must be necessarily a decrease in the amount of coal consumed and the results at the radiators must be apparent in less time, with a corresponding decrease in the consumption of coal. At some later time I may take this matter further into calculation, but at present it is too large a subject to handle.

Wishing you all success, I remain,

Very truly yours, JOS. YOUNG.

4th Prize Letter

F. A. CLEGG & CO.
127 S. Third St.

LOUISVILLE, KY., February 9th, 1911.

The Honeywell Heating Specialty Co., Wabash, Ind.
Gentlemen:—

Having been engaged in the heating business for a number of years, the writer feels that he has experienced almost every trouble that exists with hot water heating plants, and therefore believes he understands, as well as any, what a great benefit the Honeywell Generator has proven to the heating trade. Since using Honeywell Generators, these troubles have practically been overcome, and we now use them on every hot water heating apparatus that we install. One case, alone, which we have handled, is recommendation enough.

Late in the Fall of last year, we were called upon by the Manager of a large Real Estate firm here, asking that we do something to remedy the trouble with a heating apparatus in a three-story building at No. 532 E. Broadway, this city, which is occupied by Dr. R. M. Jones as office and residence. Dr. Jones had threatened to move because of lack of heat. After thoroughly examining the plant, the writer decided that a Honeywell Generator would be the very thing to remedy the defects, as the heating surface was ample, and sluggish circulation seemed to be the seat of the trouble. A proposition was submitted in accordance, and we received the contract for the work. After installing the Honeywell, we received a very complimentary letter from Dr. Jones, personally, commending our work, and stating how well satisfied he was with the system. (We have not had a word of complaint since.) Shortly after completing the work, the writer met one of our competitors, who laughed and asked if we were doing work for nothing, which he considered the case if we could do the work at Dr. Jones' residence at the price we did. When told that all we did was to install a Honeywell Generator, and that we would take all the jobs that we could get like it, he hesitated and then said he had not thought of the Honeywell Generator when figuring the work. He had figured on increasing the radiation, and anyone familiar with that class of work knows the amount of labor, beside additional radiation, that had to be figured.

Our motto is:—"USE THE HONEYWELL, GET BUSINESS, HAVE SATISFIED CUSTOMERS."

Yours truly, F. A. CLEGG & CO., By H. H. Wellage, Supt.

THE WINNING LETTERS

5th Prize Letter

IOWA HARDWARE COMPANY,
Heating & Plumbing.

VINTON, IOWA, February 13th, 1911.

The Honeywell Heating Specialty Co.,
Wabash, Ind.

Gentlemen:—

In answer to your advertisement in Domestic Engineering for fitters to compete for cash prizes, I submit the following:— I consider the Honeywell heating appliances the best I have ever used and have used them ever since they came on the market.

As to the Honeywell Heat Generator, I use it on all my new hot water jobs and have installed it on a good many old ones. With the Honeywell System of hot water heating the owner has such a long range of temperature, the water can be changed from luke warm to steam hot in thirty minutes.

There is so much to be said in praise of the Honeywell Heat Generator that in order to give it the credit it deserves and fully express its good qualities one would have to write a book. Will mention just one of my experiences with the Generator.

One cold day in the winter of 1909 one Frank Keller came to me telling me of the trouble he was having with his hot water heating plant; he said in part: "When the temperature gets down to zero I can't heat my house at all, when I leave the draught open long enough to heat the rooms to 70° the water boils out and drains the upper floor radiators, and as I have no way of filling the system only with pail and funnel through the expansion tank, it is a task that I don't like to repeat every cold morning." He said, "I've been trying to get the firm that put the job in to do something, but they put me off by saying, 'You fire too strongly,' so have come to you to see what can be done." I said to Mr. Keller, "I can overcome your trouble by attaching a Honeywell Heat Generator." He replied, "Are you sure that will overcome the trouble?" I said, "Yes, sir, I will attach the Generator on your hot water plant and let you try it a month, and if you are satisfied pay us, if not we will disconnect it and it will cost you nothing." I was sure I had the right remedy because as yet a Honeywell has never failed me on a sick hot water job. At the end of thirty days Mr. Keller came in to pay for the Generator and was perfectly satisfied with the results.

In regard to your Unique hot water radiator valve, will say:—It makes a nicer looking job, gets the radiator closer in the corner with less labor to install it, perfect circulation, no danger of freezing risers where they go to upper floors close to outside walls, as the circulation continues through risers when radiator is turned off. They are adapted to so many ways of connecting, are so far ahead of the old style valves and union ells that no fitter after using the Unique Valve will go back to the old style valve and union ell.

Your convert to the Honeywell System,
S. F. PARZYBOK, Mgr.

We wish to call particular attention to the fact that in the above letters the fitters have mentioned the names and addresses of the owners of installations referred to and any one can easily verify the statements of the contractors.

HONEYWELL HEATING SPECIALTY CO., Wabash, Ind.

How to Figure Costs on Plumbing Contracts

Manufacturer Speaks on This Important Topic Before Master Plumbers' Association—Estimates That Overhead Expenses Total 14 Per Cent. on an Invoice Cost of \$15,000.

The following address, reproduced from the Metal Worker was delivered by Joseph Evans, vice-president and general manager of the Wyoming Valley Supply and Manufacturing Co., Wilkes-Barre, Pa., before the Master Plumbers' Association of that place.

The subject assigned me for to-night, namely, "Expense and Profit," is necessarily a dry subject. I personally think that the master plumber who does business at or below cost is, to say the least, not very intelligent; and if that is true, then, from my knowledge of the majority of master plumbers in this city and county, as well as those in adjoining cities and counties, I assure you there is a woeful lack of intelligence in the plumbing business of to-day.

Now let us see what this expense is that we are talking about. To begin with, I have based my figures on the average master plumber's business—a business of about \$20,000 annually. I have assumed that this amount of business was done on an invoice cost of \$15,000. Now this invoice cost does not mean that the firm purchased \$15,000 worth of supplies, but on the contrary

that \$15,000 represented his purchase of supplies, plus his productive labor cost. I contend that the productive labor, namely, the labor that you sell at so much per hour, is and should be figured as an integral part of your invoices; therefore, that portion of your labor I have not figured as an item of expense.

Unproductive Expenses.

After a careful analysis of the subject matter at hand, based on a good fair average business, eliminating all the "extras," cutting out all the pleasure jaunts and omitting all the "Bohemian nights" (for which the old-time master plumber was famous), I have come to the conclusion that the very best any master plumber can possibly do is to conduct his business on a base cost of 14 per cent.

So far I have only indulged in assertions, but if you will accompany me a little farther we will take a hold of the real, cold facts.

First, we have the item of rent—this item may vary according to the location of the plumber, but I believe \$300 per year is a very conservative amount.

Next we have the item of unproductive salaries, such as bookkeeping and general management or supervision. Surely the item of \$1,080 for the combined efforts of two people is not too much for this work, and so I might continue on indefinitely, but to come to a conclusion here are my figures:

	Per Year
Rent, \$25 per month	\$300
Unproductive salaries, \$15 per month	180
Boss or foreman, \$75 per month...	900
Heat and light, \$3.50 per month...	42
Taxes	15
Car fare and personal expenses, 30c. per day	90
Insurance	10
Interest on investment	60
Interest on borrowed money	15
Cartage (not figured in estimates)	60
Stationery and postage	60
Freight and express	25
Loss accounts	100
Breakage and telephone	53
Allowance on claims	150
Deterioration of tools	40
	\$2,100

Or 14 per cent. on an invoice cost of \$15,000.

It is positively surprising to find such a large percentage of business men omitting the items of rent and cartage from their list of expense accounts. In fact,

one master plumber informed me that he didn't pay any rent, because he owned his own building. Another informed me that the reason he didn't figure anything for cartage was because he owned his own horse, waggon, etc.

So you see, gentlemen, knowing full well what the interest on the investment of real estate represents, and keenly appreciating the cost of maintenance for horses, waggon repairs, etc., you can readily see that these remarks prove how little some men actually know about business, and, gentlemen, I tell you that this awful amount of ignorance is the

cause of much of your troubles, to say nothing about the troubles caused the supply men and manufacturers who extend credit to the plumber. Having, I believe, given you a precise and definite subject, with facts for your consideration, I hope it will be impressed on your minds and pressed home, so that we may reach a co-operative state, when comparisons can be made without divulging names or figures and expenses on various firms in the plumbing business, with respect to the items I have enumerated. In that way something can be gained.

there is no danger of the record being lost. In the case of a new workman, the master should see to these tickets himself. Only one set of tickets may be required for a job, but if it extends over several days more may be required, according to the batches of material taken. If the ticket is delivered by a carter, let him hand the ticket to the journeyman; but the duplicate must always be filed. At the finish of the job all material should be brought back to the shop and credited by simply filling in another ticket for the returned material, and altering the word "charged" to "credited." The master should post up instructions, that under no circumstances is material to leave or be returned to the shop without entering up.

Suppose material be delivered direct from the city merchant to the job, the operative in charge should directly mark the name and address of the job on that ticket and pin it to the others, that he already has in his possession for the material received from the shop. Of course, where the establishment is large enough to keep a clerk, there is no ne-

New System for Checking Up Materials Used

**A Simple Method of Stopping Losses in Jobbing Work—
Tickets Supplied to Journeymen to Keep Track of All Material Taken Out and Brought Back to Shop.**

It is probably true that there are more losses sustained in the jobbing business than in any other branch of plumbing work. This is due to the fact that few master plumbers have any system to accurately check up the material used and the time consumed in doing the work. They trust almost entirely to the memories of their journeymen.

The method pursued as a general rule is for the men to take a certain amount of material with them, when they start out to do a job. What is not required, they take back to the shop and the difference is entered up in the bill. This is probably good enough where the job is a small one and has involved the use of only a small amount of material. But when the work has extended over several days and has been handled by more than one man, then it is an entirely different matter. One man cannot keep account of what the others are using and there is no way to find out the material used after the job is done, as a great deal will be covered up, under floors and built into walls, etc. It is an easy matter to miss an item or two and these little items soon mount up and reach formidable proportions.

A contemporary suggests the following simple method of checking up all material used on jobbing and contract work.

First of all provide 7 in. x 5 in. tickets set out thus in top left-hand corner :—

Date.....
Entered by.....
Charged to.....
Address of Job.....
Material Taken.....

These tickets can be printed very cheaply in large quantities. If it is desired, however, to keep down expenses, purchase the paper and a rubber stamp and let the boy, who minds the shop, stamp off the copies.

When material is laid out for delivery, place a slip of tracing paper between two sheets. Fill in the heading, and

 ***This sheet to be filled in directly job is completed***

Date /19 Job No.....

Charged to.....

Address.....

Address of Job.....

Full Statement of Work Done.

Labour on Job.				
_____ Hrs. _____				

Material Used on Job.				

Remarks				

Form for Keeping Track of Time and Material.

then note down all material. The journeyman doing the job can take charge of one ticket and file the other; then

cessity for journeymen to handle the tickets after they have made up the list of material.

Now your workman has a list of all material delivered on the job; unless you have paid cash for some odd lots, and these will be booked elsewhere. When he returns to the shop let him deduct the returns from what was taken, and enter up the balance on the lower section of Fig. 1. He then fills in a statement of the work done, and he and his assistants fill in their time (including time spent in booking up). Finally all tickets are fastened to the top left hand corner. A note of any plant or material left on the job to be called for should be entered on a slate kept for the purpose; or the making up of the sheet may be left until the material is actually returned to the shop.

This system is simple enough to be carried out quite handily and with no loss of time. Its adoption would effectually do away with leakages in the jobbing department.

CONCEALED TRAPS.

The Editor Plumber and Steamfitter:

Sir,—I cannot refrain from writing you at this time as I feel it is very opportune for the subject that I wish particularly to talk about. At the annual convention of the Canadian Master Plumbers' Association held in Toronto last September, a resolution was passed condemning all traps with hidden tongues. I had hopes that this would be food for thought, and my hopes have been realized although it has taken considerable time for that particular food to assimilate. Did I hear you say, "Something wrong with the digestive organs?" In my opinion this is the trouble. Having been a trap doctor for the last 35 years' time has made me conversant with the most of these troubles but we have quacks in our business who make up all kinds of condiments in the shape of No. 1, 2, 3, 4, 5, 6 cleverly arranged combinations. Now cleverly arranged deceptive combinations would be a better name. Will men who profess to teach and who make analysis of traps make honest straightforward statements of their findings. If a cleverly arranged combination trap is nothing but a freak then call it that. We expect of such men as much as we would of the chemist. If he had a sample of flour placed in front of him for analysis, in which he found ground chalk, he would naturally say it was adulterated and not good for foods. That is positive. If the teaching of our teachers is to be of any good then let it be positive. In your March 1st issue, you dealt with the annual meeting of American Plumbing inspectors and that part in particular where H. J. Luff, Cleveland, O., deals with concealed partitions or hidden tongues in traps, advocating their total prohibition. That man, if he could secure what he

aims at, would be entitled to a monument ten times larger than that of Liberty for it would mean the emancipation of 200,000,000 innocents from the manufacturers of all such traps. Mr. Luff says his serious attention was first called to this kind of trap 18 years ago. Mine is of a much longer period as it was in September of 1878 that I was called in to remove several old D traps the dip pipe or hidden tongue was eaten away by the action of gas. From that time to this I have no use for such traps, not even the nickle-plated gentry of cleverly contrived combinations of the present generation. I have never during all my years of practical application to my trade been placed where I could not install a straight bore, run-

ning, P. or S. trap or where I could not use a vent. Then why take risks and spend millions on supposed protection?

Men in business, do not allow those cleverly arranged combinations to get the best of your better judgment, but cut them out and become what, I am sure you wish to be, honest public benefactors. I am afraid Mr. Editor I will have to call a halt although I have the feeling, if I had the ability, to write a book on this subject.

J. MARR.

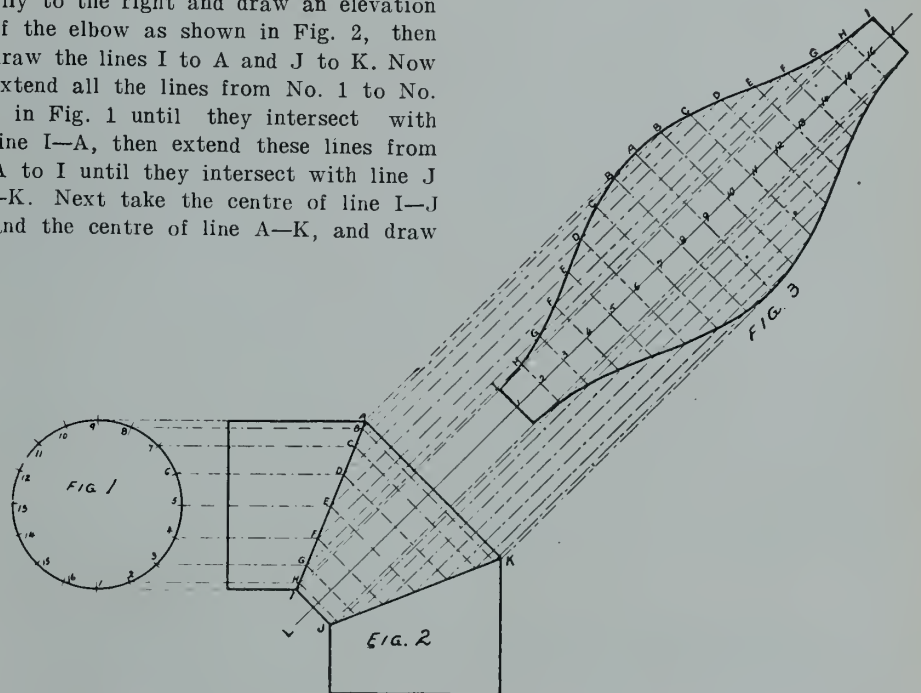
The General Supply Co., Ottawa, have issued a neat booklet, showing their complete list of high grade packings.

Pattern for Three Piece Right Angle Elbow

By Wm. J. Finnigan.

Describe a circle of the required diameter, as shown in Fig. 1, then divide the circumference into 16 equal parts, starting off with No. 1 as shown. Extend the lines No. 1 and No. 9 horizontally to the right and draw an elevation of the elbow as shown in Fig. 2, then draw the lines I to A and J to K. Now extend all the lines from No. 1 to No. 9 in Fig. 1 until they intersect with line I—A, then extend these lines from A to I until they intersect with line J—K. Next take the centre of line I—J and the centre of line A—K, and draw

L—M will intersect with No. 9 shown in Fig. 3. Point B intersects with No. 8 and No. 10 as shown in Fig. 3. Point C intersects with No. 7 and No. 11. Point D intersects with No. 6 and No.

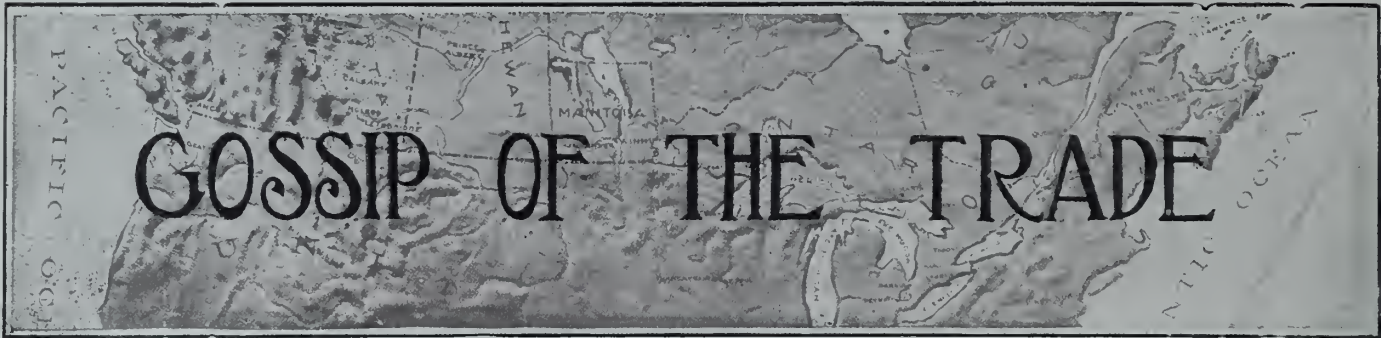


Drawing Showing How to Make a Three-Piece Right-Angle Elbow.

the line L—M. Set off on this line the 16 spaces as shown in Fig. 1, and draw a line through each of these points at right angles to line L—M as shown in Fig. 3. Now extend the lines from A to I parallel with line L—M.

As point A is the extension of No. 9 shown in Fig. 1, the line which extends from point A running parallel with line

12. Point E intersects with No. 5 and
13. Point F intersects with No. 4 and
14. Point G intersects with No. 3 and
15. Point H intersects with No. 2 and
16. Point I intersects with No. 1 and
No. 1. Draw a line where these points intersect and you will have the desired profile of the pattern as shown in Fig. 3.



GOSSIP OF THE TRADE

News Brieflets.

The assets of W. E. James, Ottawa, are to be sold.

E. J. Farrell, North Bay, was in Toronto this week.

F. A. Cowan & Son have opened up in business at Saskatoon.

Allan Butler, Whitby, Ont., is starting a tinshop in Hamilton.

Hassell and Wear have started a plumbing business at Kamloops.

Chouinard & VanMoorham, plumbers, Montreal, have dissolved partnership.

The Cranbrook Plumbing Co. has started business at Cranbrook, B.C.

Segel & Willa have started a plumbing and tinsmithing business in Winnipeg.

A. R. Dundas, Cobourg, has been elected president of the Cobourg Board of Trade.

G. G. Lemsky has taken over the tin-smith shop of Moore & Camroux, Langham, Sask.

Frank E. Burke has opened a plumbing, heating and tinning business in Tillsonburg.

Mr. Malcolm, of Stevenson & Malcolm, Guelph, is reported to be dangerously ill with pneumonia.

F. G. Calder, plumber of Trail, B.C., has sold his business to R. Black. He is leaving for Vancouver.

The Lennox, Mackie Co. are succeeding to the plumbing business of the Lennox Hardware Co., Winnipeg.

A. E. Simons, Hamilton, has rented a shop in Cannington, Ont., and will start in the plumbing and tinsmithing business.

Henry Boettger has opened a plumbing, tinsmithing, heating and lighting shop in Rosthern, Sask.—He is located on Ens street.

Repairs are under consideration to the court house at London, Ont. The plumbing work will total \$1,600, and the heating and ventilating \$9,500.

There has been a rush of applications for the position of sanitary inspector in Guelph. No less than 56 were received in the course of a few days.

Arthur J. LeFay, formerly heating and ventilating engineer for the Pease-Weldon Co., Winnipeg, has taken charge of the plumbing and heating department

of the Saskatoon Hardware Company's business.

Organizer Bruce of the Plumbers' International Union, gave an address before the Guelph journeymen plumbers in the Trades and Labor Hall.

Thomas Frost, who has been traveling for the Pease-Waldon Co., Winnipeg, has joined the staff of the Waldon Heating and Engineering Co., as traveling representative west of Winnipeg.

Contracts have been let for the heating and plumbing of the Bishop's palace, now being completed at North Bay, to F. R. McPherson, Peterboro. J. E. Farrell secured the contract for electric wiring.

L. Hunt, St. Catharines, has purchased the plumbing stock of the J. Long Co., Welland, insolvent, at sixty-one cents on the dollar. The general creditors, it is understood, will receive about 10 cents on the dollar after the preferred creditors are paid.

Ideal Packless Valve Co., Ltd., have been incorporated with head office at Walkerville, Ont.; capital \$40,000; to manufacture valves and fittings; provisional directors, Frederick F. W. Stodgill, Annie Tibble and others.

Inspector is Named.

At a special meeting of the council of North Vancouver, J. W. Fugler was appointed plumbing inspector at a salary of \$100 per month. There were 67 applicants for the position.

Taking on New Lines.

The Strathmore Hardware Co. have commenced work on a new tinshop. They intend to carry a full line of heating, plumbing and tinning supplies, and to undertake work in all these lines.

To Establish Comfort Stations.

The Civic Board of Works of St. John, N.B., have appointed a committee to look into the matter of establishing comfort stations in that city. It is proposed to locate an underground station on Market square and one on King square.

Firm Changes Hands.

Brickman & Co. have purchased the business of D. L. Myers & Co., 46 Wellington street, Stratford. In addition to a full line of plumbing supplies, the

new firm are putting in a new line of cutlery, ready mixed paints and varnishes. They also intend to add a small assortment of hardware.

Going Into Plumbing.

Mr. and Mrs. G. T. Barry, who are going to carry on the hardware business formerly conducted by the Strathmore Trading Co., are building an extension at the rear of the store, where they will have a first-class tinsmithing and plumbing shop.

License Fee Fixed.

The North Bay council has put through a by-law fixing the master plumbers' license at ten dollars per annum. The by-law requires that plans of all plumbing are to be submitted for inspection and that a permit be issued before the work is proceeded with.

Have a Surplus.

The ball recently given by the Toronto Master Plumbers was a success financially. When questioned as to the amount left on the right side of the ledger, A. F. Passmore replied that the surplus would equal the profit in a \$400 job. But on what percentage was "A. F." figuring?

Well-Known Plumber Dies.

William Baxter Malcolm, a pioneer plumber and gasfitter, died at his home, 620 Church St., Toronto, aged 72 years. He was in business for years at Church and Lombard Sts., and had a wide connection. Mr. Malcolm, who was a native of Dundee, Scotland, leaves his widow. He was a member of the Cecil Street Church of Christ. General regret will be felt at the news of his death, as he was universally esteemed.

Want an Inspector.

Brantford master plumbers want a competent inspector appointed there instead of the man furnished by the city engineer's department. Recently four men representing the plumbers in the city waited on the board of works and urged that some action be taken in regard to an inspector. They are desirous of having only first-class plumbing installed in Brantford homes. At present too many boys and green men are despatched to execute big jobs. An in-

spector who would be on the job could attend to such cases. Another point they emphasized was the advisability of doing away with the hopper closets. The board were favorable to such.

Old Firm Moving.

The plumbing firm of John Wright, Toronto, which was established in 1855 and is therefore one of the oldest firms in the Queen City, is moving from the shop on Yonge street, which has been occupied for the last 36 years. The new store is just around the corner on Gerard street. The Wright Co. own a three-storey building to the rear of the old premises, which they will continue to occupy. They have three floors 59 by 18 feet in this building.

Master Plumber Drowned.

Lying with his head submerged in only little more than a foot of water, William Green, a Toronto plumber and contractor, was found dead in a creek near Greenwood avenue. The finding of the body has considerably mystified the police. The unfortunate man was seen an

hour before his lifeless body was found in the creek. His watch and a sum of money were found on him, and there was nothing to point to foul play. On the other hand, the deceased had been doing a splendid business and there was no motive for suicide. He was a married man, 32 years of age, and leaves two children.

A Big Contract.

Vancouver, B.C., March 18.—The Bearisto Plumbing Company, of Winnipeg, has a \$20,000 contract for the plumbing of the C.P.R. tourist hotel at Balfour in the Kootenay district. The vacuum heating system will be used. A force of men has been at work for some time, and Mr. Bearisto was out on a trip this week to take a look at things. The Bearisto Plumbing Company has installed the plumbing for the Laggan, Banff, Red Deer, and Fort William depots or hotels, and is now putting in the plumbing for the union depot at Calgary. Mr. Napier has been appointed assistant plumbing inspector in South Vancouver.

The man who is building or repairing, will ask for bids from the plumbers who are known to him. Of course, any plumber, by keeping his eyes open, will hear of a great deal of the work that is going, but some of it is bound to escape him, and possibly some of the best contracts will.

It therefore behooves the plumber to advertise his business, and the next question is, how to do it the most effectively.

Poor Advertising.

Most plumbers content themselves with writing an ad. something after this style: "Smith & Jones, Plumbers and Steamfitters. Repairing promptly done." They seem to forget that through their advertisement they are talking to the people, and the impression made upon the people will depend upon the kind of talk they give. If they were actually speaking, in person, to a prospective builder they would not talk the way their ad. does, because it would spoil their chance of getting an order.

The Better Way.

A good advertisement will give the reader some reason for patronizing the advertiser, and, in these days of extreme care in sanitary matters, the plumber who gets business must have something to commend him. His ads. should be written for the purpose of creating public confidence in his ability to make a good plumbing job. In this connection, references to good work that he has done should be effective.

Instead of the ordinary "announcement" style of advertising, something after the following model would be likely to bring better results: "We do reliable plumbing. Our staff are all trained mechanics, and, as they work under our personal supervision, we can guarantee every joint they make. When our workmen leave a job, it's right! We have done the plumbing and heating in the Public Library, Post Office and Public School. Give us your plumbing jobs and will do just as good work for you."

Signboards on a Job.

In the larger cities, contractors in every trade invariably call attention to the large jobs they are doing, by putting up signboards on the outside of the building, with some such wording as this: "The plumbing in this building is being done by Smith & Jones."

These signboards are good advertising and plumbers in the smaller places should adopt the plan. The boards would not cost much, and they would help to start a lot of people talking about Smith & Jones getting all the big plumbing contracts.

Why and How Plumbers Should Advertise

Building a Reputation Through Newspaper Publicity—Should Put Name Before All Possible Customers—Ads. Must Give Reasons for Soliciting Business.

If there is any one class of master mechanics who should keep their names persistently before the public, it is the plumbers and steamfitters.

It might be objected that the plumber, as a rule, is not a merchant, and has nothing to sell which could be advertised to advantage. But, if he has little stock, he has a staff of workmen who must be kept employed. He pays them high wages—possibly the highest wages ruling in any trade—and every minute that any of them are idle takes money out of the master plumber's pocket.

Every plumber, therefore, is selling his services and those of his men, to the public, and, in order to keep his staff busy, it is necessary to let the public know what he is prepared to do. There is no better medium for spreading this information than the local newspaper.

Two Kinds of Customers.

Roughly speaking, the plumber has two kinds of customers. They are, the people who already have plumbing and heating systems installed and require occasional repairs, and those who are building or improving their premises by installing complete systems.

Both of these classes should be appealed to, through newspaper advertis-

ing, and the plumber who makes himself best known to the public, will, if his prices are reasonable, get his full share of the business that is going.

The man who requires to have his plumbing or heating repaired, is generally in a hurry. Something goes wrong and it must be made right at once, or the health of his family will suffer. He has no time to make inquiries about plumbers who would be likely to do a good job for him. He goes immediately to the shop which is most familiar to him, and the chances are that it has become familiar to him through its advertising.

Contract Work.

The other class of customers—those who have contracts to let—are decidedly worth cultivating. Every order that is secured means enough to keep the staff going for some time, and it should also mean a good profit. How to get this class of business is therefore something that is worth thinking over.

While, undoubtedly, there are many plumbing contracts which are let to the man who puts in the lowest price, there is a lot of business to be influenced by the reputation of the plumber, and the surest way to gain a reputation is to advertise, and back up the advertising with good work.

PLUMBING AND HEATING MARKETS

MONTREAL.

Montreal, March 29.—Business continues to be quite satisfactory and is apparently improving. There are some who are not as busy as they might be, but on the whole the season is rather favorable to the trade. The amount of new business that is looming up speaks well for the future and the work now being carried on may be considered good for this season. Locally the conditions indicate a brisk year and the reports from the country in general are correspondingly encouraging. Some of the work now in progress is the equipment of new buildings. On the whole the trade are in a fairly good way as regards present work and contracts.

Boilers and Radiators.—There is considerable heating work being done just now and the installing of radiators contributes a large share of it. The demand as a result has been fair for this season and the future should bring additional business in increasing extent.

Enamelware.—Spring has been slow in opening and while there is a fair amount of business there is quite a little room for improvement. The supply houses are showing some fine stocks showing that this department is keeping up in the front rank in the matter of modern improvements and catering to the public taste.

Metals.—The metal markets have not changed very materially with the exception of the conditions controlling anti-money. The latter, like tin, is apparently in the hands of a syndicate, thus offering an explanation for the recent increase in price. Tin fluctuates almost regularly. Copper has been rather unsettled and lead and spelter have been rather quiet.

Plumbers' Supplies.—A good demand for supplies is reported, but business is rather confined just now.

Solder.—The trade are using considerable quantity of solder which does not show any appreciable change recently.

TORONTO.

Toronto, March 29.—Business is reported to be fairly brisk, despite the handicap of inclement weather conditions. It is generally expected that the first of the month will see activity in all lines. Enquiries in large number are being received.

Prices are practically the same in most lines. A slight increase went into effect to-day on medium and heavy soil pipe. There is an easier tone to iron pipe and fittings and solder is also selling at a slightly lower figure. The changes that were anticipated in enamelware have not yet gone into effect.

Enamelware.—The demand has grown to spring-like proportions and enquiries are frequent. The prices remain the same as at the time of last issue.

Boilers and Radiators.—It is generally expected that the demand for boilers and radiators this year will break all records. If reports emanating from all sections of the country are to be relied on, building operations this year will be largely in excess of 1910, or any preceding year, and this will mean, of course, a corresponding activity in the heating trade. At the present time, there is a good demand and it seems that there is more work being done than is usual at this time of the year.

Soil Pipe.—The strengthening tendency shown of late culminated to-day in a small increase in medium and heavy soil pipe. The present discount is 70 and 10. A discount of 50 per cent. is still allowed on the 7 and 8-inch sizes.

Lead Pipe.—There is a fairly good demand and conditions are improving quickly. Lead waste is quoted at 9c. per lb., with a 30 per cent. discount. Caulking lead is quoted at 4½c. per lb.; traps and bends show a discount of 50 per cent.

Iron Pipe and Fittings.—Business is fairly brisk in this department. A tendency to quote lower prices in most lines is noted but some firms are still holding to their old discounts. Cast iron fittings range from 65 to 75 per cent. Malleable fittings stand at 37½ to 40 per cent. Cast iron bushings are 70 and malleable run all the way from 65 to 70. Nipples remain firm at 75 and 10, but 67½ is allowed by some firms on headers, while others still quote 60 and 10. Flanged unions stand at 70; malleable-lipped unions, 65 to 67½c.; galvanized pipe, \$6.18; black pipe, 1-inch size, \$4.54.

Solder.—There is a trend toward lower prices in solder, due to the unsteadiness of tin. Half-and-half is to-day sold at 25c. and wiping is quoted from 21c. to 22c. There is a growing demand for solder.

Metals.—There is a brick tone to business in metals here. In no direction is there the least trace of dullness and in some metals, the demand is much bigger than is usually experienced at this time of year. Factories are working longer hours, so that business in pig iron has shown increases of late. Copper and tin are active and the tone in other metals shows some improvement. The tin market can best be characterized as erratic. It has shown almost daily variations in price and is now quoted at 43 cents.

SEND IN THE NEWS.

News pertaining to the trade will be gladly used in the columns of Plumber and Steamfitter. If you know of something that would interest brother plumbers in other parts of the country, send it along. Personal items and association notes are not difficult to obtain; drop us a line when you hear something worth while. Photographs of stores, plumbers' meetings or illustrations of trade problems would also help to give our news columns an added interest.

TO ARBITRATE.

Spokane, March 21.—Disputes over jurisdiction between the journeymen plumbers and the steamfitters which resulted in the former being called off building jobs all over the city on Monday are to be arbitrated, though the contentions are likely to be carried before the United States Courts before a final settlement is reached. Decision to arbitrate was reached yesterday in a joint meeting held by representatives of the warring unions and the master plumbers. The board will be made up of a representative of each union and one disinterested party.

It does not take much time (really none at all, extra) if you watch your time and chance as the job progresses under installation to get about all the information to the owner as he sort of hangs around watching you. Some fitters get cranky as sin, if the owner comes along and asks a question or two and take the occasion to exhibit their independence (put it ignorance rather), by either not answering at all, or giving a surly reply. It is on just such seemingly small points that the life and the business turn and the journey thereof becomes as on a pavement of macadam or the bumps over a corduroy road. This series was called points on heating, and it will also have some points on selling, on installing and, in order to do your hearts good, it will have some points on common human sense also, which I am bound to say is needed in a great many places in this craft and business of ours. 5 p.c. 30 annual installments, issued for

With the car running at good speed it is no time to be careless about the curves. With the business running well the leaks and the buying and selling mistakes need no less watching.



NATIONAL

CONVINCING PROOF

of superiority and unqualified approval of the "NATIONAL" and "IMPERIAL" Closet combinations, is in the ever increasing demand we are receiving for these goods.

Try us with an order and be convinced.

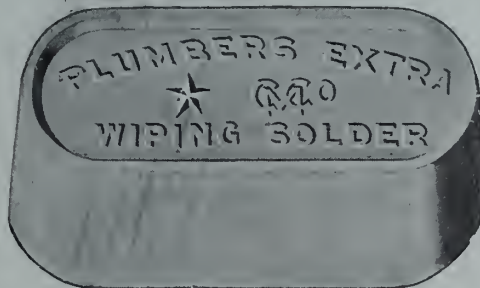
Complete line of Plumbing Supplies and prompt shipments made.

THE NATIONAL PLUMBING SUPPLY CO., LIMITED

191-193 Adelaide St. West, TORONTO

HAMLET was determined to speak to the **GHOST**. We are just as determined to tell you, **MR. PLUMBER**, that we manufacture

I'll speak to it
Tho' HELL itself should gape
And bid me hold my peace.
—Hamlet



SOLDER, LEAD PIPE,
LEAD WASTE,
LEAD TRAPS AND BENDS,
BLOCK LEAD, ETC.

THE CANADA METAL CO., Ltd., TORONTO

CAST IRON FITTINGS

Being manufacturers of Cast Iron Fittings exclusively, we are naturally in a position to give quality the first place, which accounts for the high standard maintained.



That our fittings are being recognized by the trade as a standard is proven by our largely increased sales which have made the installation of additional machinery necessary.

Standard Fitting & Valve Co., Ltd. - Guelph, Ont.

To the Manufacturer or Wholesaler—

If it were possible to employ a traveller who could call on thousands of the best dealers all through Canada every week, what salary would you figure he'd be worth—even supposing he did nothing more than go in and shake hands with these dealers, under such circumstances they'd be glad to see him.

Would he be worth \$200, \$300 or \$500 per week? Many a house would pretty nearly let him fix his own salary.

Equip an advertisement in this paper with a verbal handshake for every dealer in Canada, and a frank, brief, pointed talk about your goods and you add a traveller to your staff who will make thousands of calls a week for you at a salary of \$4 to \$8 a week—less than you would pay a first-class stenographer.

Of course this traveller won't displace any of your regular salesmen, but he will help them to sell more goods and open up more new accounts.

Condensed or "Want" Ads.

MISCELLANEOUS.

ADDING TYPEWRITERS write, add or subtract in one operation. Elliott Fisher, Limited, Room 314, Stair Building, Toronto.

ACCURATE COST KEEPING IS EASY if you have a Dey Cost Keeper. It automatically records actual time spent on each operation down to the decimal fraction of an hour. Several operations of jobs can be recorded on one card. For small firms we recommend this as an excellent combination—employees' time register and cost keeper. Whether you employ a few or hundreds of hands, we can supply you with a machine suited to your requirements. Write for catalog. International Time Recording Company of Canada, Limited; office and factory, 29 Alice Street, Toronto.

COPELAND-CHATTERSON SYSTEMS—Short, simple. Adapted to all classes of business. Copeland-Chatterson-Crain, Ltd., Toronto and Ottawa. (tf)

COUNTER CHECK BOOKS.—Write us to-day for samples. We are manufacturers of the famous Surety Non-Smut Duplicating and Triplicating Counter Check Books and Single Carbon Pads in all varieties. Dominion Register Co., Ltd., Toronto.

COUNTER CHECK BOOKS—Especially made for the plumbing and steamfitting trade. Not made by a trust. Send us samples of what you are using—we'll send you right prices. Our holder with patent carbon attachment has no equal on the market. Supplies for binders and monthly account systems. Business Systems, Limited, Manufacturing Stationers, Toronto.

DOUBLE your floor space. An Otis-Fensom hand-power elevator will double your floor space, enable you to use that upper floor either as stock room or as extra selling space, at the same time increasing space on your ground floor. Costs only \$70. Write for catalogue "B." The Otis-Fensom Elevator Co., Traders Bank Building, Toronto. (tf)

EGRY BUSINESS SYSTEMS are devised to suit every department of every business. They are labor and time savers. Produce results up to the requirements of merchants and manufacturers. Inquire from our nearest office. Egray Register Co., Dayton, Ohio; 123 Bay St., Toronto; 258½ Portage Ave., Winnipeg; 308 Richards St., Vancouver.

FIRE INSURANCE. INSURE IN THE HARTFORD. Agencies everywhere in Canada. (tf)

MAKE MONEY AND SAVE MONEY with the Multigraph. It does multiple typewriting and real printing. 1200 to 5000 sheets an hour, gets new business with form letters or printed advertising, saves 25% to 75% of printer's charges on stationery and forms. American Multigraph Sales Co., Ltd., 129 Bay St., Toronto.

MOORE'S Non-Leakable Fountain Pens. If you have fountain pen troubles of your own, the best remedy is to go to your stationer and purchase from him a Moore's Non-Leakable Fountain Pen. This is the one pen that gives universal satisfaction and it costs no more than you pay for one not as good. Price \$2.50 and upwards. W. J. GAGE & CO., Ltd., Toronto, Sole Agents for Canada.

INDISPENSABLE in Office, Store, Home—Canadian Almanac, 1911—a National Directory. Complete classified information on every subject of Dominion interest. Full postage, customs, banking, insurance, legal, educational, newspaper, army, clerical, governmental, particulars of leading institutions and societies. Paper covers, 60c.; cloth leather back, 75c. All stationers, or sent postpaid on receipt of price by The Copp-Clark Co., Ltd., Toronto.

KAY'S FURNITURE CATALOGUE No. 306 contains 160 pages of fine half-tone engravings of newest designs in Carpets, Rugs, Furniture, Draperies, Wall Papers and Pottery with cash prices. Write for a copy—it's free. John Kay Company, Limited, 36 King St. West, Toronto.

WAREHOUSE AND FACTORY HEATING SYSTEMS. Taylor-Forbes Company, Limited. Supplied by the trade throughout Canada.

YOU don't buy a National Cash Register—it pays for itself. Saves money. Prevents mistakes. We can prove it. National Cash Register Co., 285 Yonge Street, Toronto.

MODERN FIREPROOF CONSTRUCTION. Our system of reinforced concrete work, as successfully used in many of Canada's largest buildings, gives better results at lower cost. "A strong statement" you will say. Write us and let us prove our claims. That's fair. Leach Concrete Co., Limited, 100 King St. West, Toronto.

PENS—The very best Pens made are those manufactured by William Mitchell Pens, Limited, London, England. W. J. Gage & Co., Limited, Toronto, are sole agents for Canada. Ask your stationer for a 25c. assorted box of Mitchell's Pens and find the pen to suit you.

RETAIL MERCHANTS AND OTHERS with a limited correspondence will find it to their advantage to write us for catalogue of special bargains in rebuilt Typewriters. We have all the well known makes, taken as part payment on the Monarch, and at the prices we offer them they are remarkable bargains. The Monarch Typewriter Company, Ltd., 46 Adelaide Street West, Toronto, Ont.

THE "Kalamazoo" Loose Leaf Binder is the only binder that will hold just as many sheets as you actually require and no more. The back is flexible, writing surface flat, alignment perfect. It cannot get out of order. No exposed metal parts or complicated mechanism. Write for booklet. Warwick Bros. & Rutter, Ltd., King and Spadina, Toronto.

BOOKS FOR PLUMBERS.

PRACTICAL HINTS ON JOINT WIPING, for beginners in plumbing. This book contains two original articles on joint wiping by experts, together with a selection of letters and articles on various important phases of the subject. 66 pages, 41 illustrations. Price 25c.

MACLEAN PUBLISHING CO., Technical Book Dept., 143-149 University Avenue, Toronto.

THE WANT AD.

The want ad. has grown from a little used force in business life, into one of the great necessities of the present day.

Business men nowadays turn to the "want ad" as a matter of course for a hundred small services.

The want ad. gets work for workers and workers for work.

It gets clerks for employers and finds employers for clerks. It brings together buyer and seller, and enables them to do business though they may be thousands of miles apart.

The "want ad." is the great force in the small affairs and incidents of daily life.

Keep in mind the dominant fact that mankind from its first appearance on the earth has been schooled by nature to look for signs; for invitations to taste; for suggestions as to what to wear. Tell your story briefly, forcibly, truthfully, and address it through the proper media and you can successfully apply advertising as a means to increased distribution.

When writing advertisers kindly mention having seen the advertisement in this paper.



Vulcan-Bijaws

(The Improved "Vulcan")

Not a Gamble!

We are anxious to have you understand what you are getting in "Vulcan-Bijaws."

The tools are made by the pioneers in Chain Tool business. The experience of years is crowded into the "Vulcan-Bijaws."

1. **THE OPERATION:** Same as old "Vulcan" tool—nothing new to learn.
2. **THE LIFE:** The reversible jaws provide double service of any similar tool.
3. **THE STRENGTH:** Auxiliary bolt provides for accident emergencies and strength of tool is vastly increased.
4. **THE QUALITY:** Unequalled and every part fully guaranteed, same as "Vulcan."
5. **THE PRICE:** Same as for old style non-reversible jaw-tool, of "Vulcan" quality.

Consult your dealer

J. H. Williams & Co.

Superior Drop-Forgings

77 Richards Street
BROOKLYN NEW YORK

DIRECTORY OF MANUFACTURERS

Plumber and Steamfitter receives, from time to time, enquiries for the names of manufacturers of various lines. These enquiries come from firms who usually intimate they have looked through Plumber and Steamfitter but cannot find any firm advertising the line in question. In many cases these firms are anxious to secure the information at once. This page enables manufacturers to keep constantly before the trade lines which it would not pay to advertise in larger space.

EMERY WHEELS.

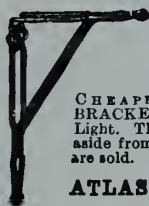


Canadian Hart Wheels

442 Barton St. East, Hamilton

Corundum and Emery Wheels
Grinding Machines, Beaver
Oil Stones.

SHELF BRACKETS.



Will Hold Up a Shelf

That's what a shelf bracket's for. For this purpose there can be NOTHING BETTER, NOTHING CHEAPER than the BRADLEY STEEL BRACKET. It is well Japanned, Strong and Light. The saving on freight is a good profit aside from the lower price at which the goods are sold. Order direct or through your jobber.

ATLAS MFG. CO., NEW HAVEN



THIS IS THE DAY OF

INVESTIGATION

Get in line and let us prove to you that the

GENUINE
Armstrong Stocks and Dies

ARE THE BEST.

Catalogue on request.



The Armstrong Mfg. Co.

317 Knewlton St.
Bridgeport, Conn.

FILTERS.

Anti-Splash Tap Fitters

The "Galvo" Filter and Water Steriliser
"Perfection" Fire Extinguishers

There's good money in them for hardware dealers.
Write for Prices.

The Anti-Splash Filter Co.
OWEN SOUND . . . ONTARIO

MANUFACTURERS' AGENTS.

The Manufacturers Sales Co.
MONTREAL

Frederick H. Reid, Manager

Representing manufacturers of high-class specialties, including "Handhook," "So-Clean," and others.

We are open at any time to receive propositions from first-class manufacturers who wish to be represented in Canada. Write at once. Best of references.

MANUFACTURERS' AGENTS.

Western Distributors, Limited
CUSTOMS BROKERS

Wholesale Commission Merchants and Manufacturers' Agents. Cars Distributed, Warehoused and Forwarded. Warehouse on Transfer Track. Business solicited.

OUR POSITION IS YOUR OPPORTUNITY
SASKATOON, WESTERN CANADA

BRONZE POWDERS

BRONZE LIQUIDS

The
Canadian Bronze
Powder Works
Montreal Toronto
Works, Valleyfield

Send us your orders and we guarantee the quality

TINSMITHS' HELPER AND PATTERN BOOKS



A useful handbook for Tinnerns and Sheet Metal Workers. It treats the simpler problems in pattern cutting occurring daily in the shop besides giving tables and information constantly needed by the mechanic.

Section 1—DIAGRAMS and PATTERNS. Demonstrates 50 examples of pattern work, such as cutting flared tinware, elbow patterns, etc.

Section 2—EPITOME OF MENSURATION. Describes how to find the area and circumference of a circle, contents of a sphere, etc.

Section 3—TABLES, RULES and RECIPES. Gives the weights of sheet metals, capacity of cans, recipes for mixing solders, cements, etc.

Price \$1.

53 Figures

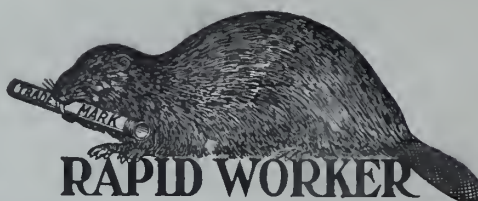
MacLean Publishing Company

Technical Book Dept. 143-149 University Ave., Toronto, Can.

When writing advertisers kindly mention having seen the advertisement in this paper.

Nature has solved the problem of distribution. It uses a multitude of agents to effect the distribution of its products.

Nature does not expect every seed to fall upon fallow ground and to take root. But, it achieves a profitable percentage upon its distribution. This is all that an advertiser has to do to reap a profitable harvest on his outlay.



RAPID WORKER

One man with a Beaver Die Stock is worth two or three men with any other Die Stock made.

"Beaver" Adjustable Die Stocks

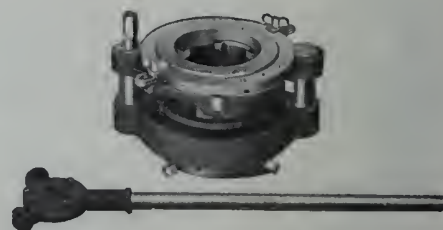
HAVE cut the cost of pipe threading in two because they will thread all sizes of pipe without changing dies. They are built on the receding principle which positively enables one man to thread any size of pipe and produce absolutely tight joints for all work, including hot water. They save the time formerly used up in changing dies and looking after loose parts, and eliminate all of thread-stripping when backing off.



No. 25A, threading 1, 1¼, 1½, 2-inch pipe.
A boy can operate it,



No. 6, threading ¼, ½, ¾ inch, complet



No. 60. Uses two sets of dies. One set cuts 2¼, 3, 3½ in. the other cuts 4, 4½, 5, 6 in.; they are inserted without removing any parts.

No loose Bushings or loose Dies on No 25A and No 6, and they cut 1, 1¼, 1½ and 2-inch pipes.
We can furnish a separate set of dies for 1, 1¼, 1½ and 2-inch pipe.

Write us for Illustrated Price Lists.

BORDEN CANADIAN COMPANY,
66 Richmond Street East Toronto, Ontario

Plumbers' Rubber Goods --- Best Quality

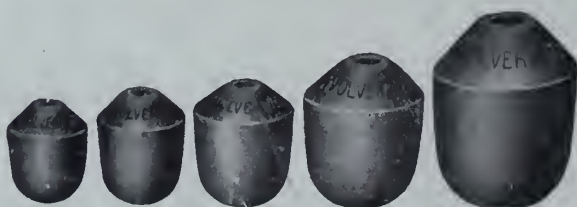
SYPHON RINGS



WASTE WASHERS



FULLER BALLS



And Many Others

Dandy Connections



SLEEVE



30 Pages of CATALOGUE "F"

devoted to

Plumbers' Rubber Goods

Write to

Canadian Wolverine Company, Ltd., Chatham, Ont.

A Hundred Years Ago

this business was started in a very small way. By selling reliable goods and giving all our customers a fair and square service, it has grown to be one of the Largest Plumbing Supply Firms in the trade.

“Scotia” Plumbing Supplies

embrace the products of all the most reliable manufacturers in the trade. We carry large stocks and can generally ship from stock on receipt of order.

Test Our Service With a Trial Order.

Wm. Stairs, Son & Morrow, Limited

HALIFAX - - - NOVA SCOTIA

Established A.D. 1810

Economy---Efficiency---Durability

These are three leading features of the

SOVEREIGN BOILER

which make it a real pleasure to recommend and instal.

It is economical in fuel consumption, because no fuel is lost in the ash pit, and all heat generated comes directly in contact with surfaces to be heated.

It is efficient in the rapid circulation of the water and in the ease with which it is operated.

It is durable, because made of high quality materials by experts in the business and tested thoroughly before shipment.

May we give you further details? Send for our descriptive booklet.

Taylor-Forbes Co., Limited

Head Office and Works

GUELPH, ONT.

Taylor-Forbes Co., Ltd., 246 Craig St. W., Montreal, Que. Taylor-Forbes Co., Ltd., 1070 Homer St., Vancouver, B.C. W. R. Mathers, 46 Princess St., St. John, N.B. The Vulcan Iron Works, Winnipeg, Man. The Mechanics Supply Company, Quebec, Que.



Modern Lavatories



No. 806.—High Back "Victorian" Lavatory

The "Victorian" Semi-Porcelain Lavatory here illustrated represents the most up-to-date sanitary fixture of the kind. It's like a piece of table chinaware, made durable, and very strong for bathroom and lavatory requirements.

All corners rounded off and decorative mouldings dispensed with, ensuring highest hygienic qualities and perfection in design.

These Goods are Fully Guaranteed Not to Craze

Made in an assortment of sizes for side wall or corner. If you want the latest thing out, ask for the "Victorian."

The Jas. Morrison Brass Mfg. Co., Limited

93-97 Adelaide Street West, TORONTO



SUPPLY

"Kerr" Radiator Valves

on your heating work, and
your valve troubles are over

The

Kerr

Engine

Co., Limited

*We charge the
price and furnish
the reliable goods*

Look for
Our Name
"KERR"
on All
Genuine
KERR
VALVES



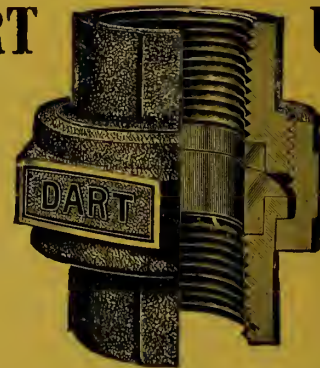
Walkerville - Ontario

DART UNIONS

Combine the Good
Qualities of Bronze and
Malleable Iron.

The joint itself is bronze to bronze, making corrosion impossible, and the smoothly ground ball joint is so made that there can be no leakage under any conditions. The remainder of the Union is of malleable iron, threaded absolutely to standard and it gives rigidity that increases the life of the union.

ASK YOUR JOBBER FOR
DART UNIONS



DART UNION COMPANY

TORONTO

LIMITED

CANADA

PLUMBER & STEAMFITTER

and Sanitary Engineer of Canada

THE MACLEAN PUBLISHING COMPANY, LIMITED, PUBLISHERS

MONTREAL, 701-702 Eastern Townships Bank Bldg.
LONDON, ENG., 88 Fleet St. E.C.

TORONTO, 143-149 University Ave.

WINNIPEG, 511 Union Bank Building
NEW YORK, 115 Broadway

Vol. V.

Publication Office : TORONTO, APRIL 15, 1911.

No. 8



COMPANY LIMITED
GENERAL OFFICES AND FACTORIES - PORT HOPE - CANADA



FUROPA BATH, 19 INCHES DEEP.

96 OF THESE BATHS ARE SUPPLIED TO
FREEMAN'S NEW HOTEL
ST. JAMES STREET, - - - MONTREAL

Bathing in a
19 inch deep bath covered
by water to the
neck instead of
only over the
limbs is an in-
expensive
yet luxur-
ious com-
fort.

BRANCH OFFICES AND SHOWROOMS

TORONTO 119 KING STREET EAST	MONTREAL 155 NOTRE DAME WEST	WINNIPEG 76 82 LOMBARD ST
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Beaver Brand

Cast Iron Enamel Ware

Noted for Good Color, Durability and Attractiveness



The above cut shows our Wall Lavatory—artistic, sanitary and durable.

One of our leading sellers. Our splendidly equipped plant is producing an unbeatable range of enameled Bath Tubs, Slop Sinks, Kitchen Sinks, Laundry Tubs, Lavatories, Closets, etc., and our customers can be sure of satisfactory goods promptly shipped. A guarantee goes with all Beaver Brand Enameled Ware.

Amherst Foundry Co., Ltd., Amherst, N.S.

ONTARIO SALES AGENT:

MONARCH BRASS MFG. CO., LTD., ¹⁷⁸⁻¹⁸⁰_{Victoria Street,} TORONTO

MARITIME PROVINCES
All Jobbing Houses

MONTREAL, P.Q.
All Jobbing Houses

WINNIPEG, MAN.
E. B. Plewes, 120 Lombard St.

VANCOUVER, B.C.
A. O. Campbell

The Honeywell System OF HOT WATER HEATING

WAS ADOPTED IN THE YEAR 1910 IN

FORTY PER CENT.

OF TOTAL

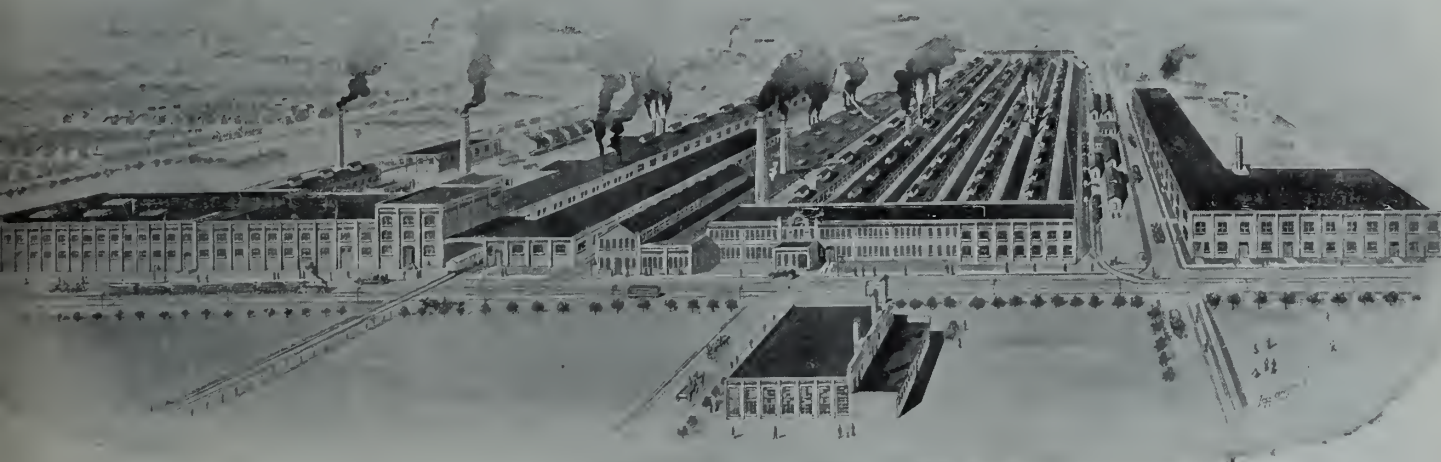
Hot Water Installations Throughout Canada

Upon no other point are Architects, Steamfitters and Proprietors so well agreed as on the Merits of the Honeywell System.

The Honeywell Heating Specialty Company

Frank T. Rawley,
Manager for Canada

Room 1008 Eastern Townships Bank Bldg., Montreal.
Phone Main 4615



Malleable and Cast-iron-pipe Fittings

MANUFACTURED BY

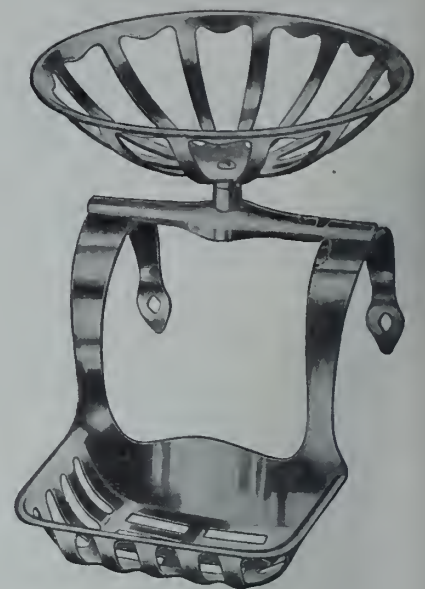
FITTINGS LIMITED

OTTAWA

- WINNIPEG

- MONTREAL

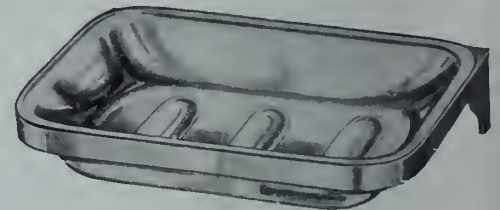
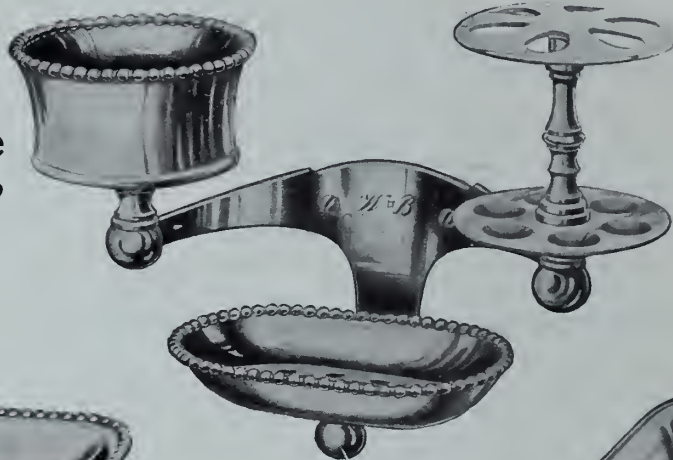
Some of the
Necessary Articles
for the
Bathroom



Also a complete
line of Plumbers'
Specialties

QUALITY

A strong point
with us



Canadian Wolverine
Company Limited

Chatham Manufacturers Ontario



We Guarantee
Our Output

Write us Now

Fig. I

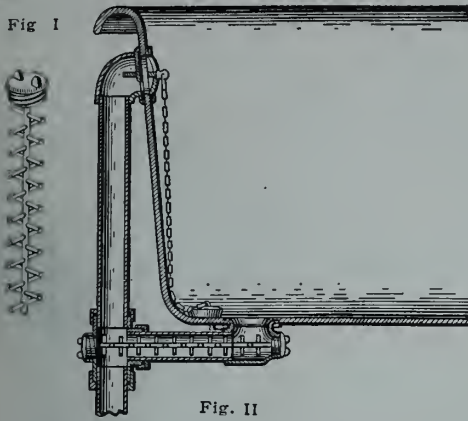


Fig. II

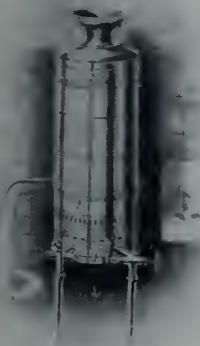
E.N.O. Patent Bath and Waste Overflow

SOMETHING NEW

Here is a Bath Waste and Overflow that can be thoroughly cleaned out from two outlets, viz: back of Bath or underneath. The Cleanout Rod, Fig. I, is made of aluminum, has a ball joint connection to the plug. All the fittings are of cast brass and heavily nickel plated. The whole is got up for use and will stand more abuse than any other Bath Waste in existence. Our patent can be used with any standard bath on the market.

SOLE CANADIAN MANUFACTURERS

Westport Mfg. & Plating Co., Limited
117½ BANK STREET, OTTAWA



VENT "RAPID" BATH HEATER NON-VENT A CUP FULL—A TUB FULL—AN ENDLESS FLOW

of hot water—instantly—day or night—summer or winter—of unequaled convenience for shaving—bathing—or sudden illness requiring hot applications—

The 'Rapid' Instantaneous Bath Heater is easy to operate. Light Pilot—Turn Lever—Hot Water Instantly—A few minutes later when bath is ready—turn down lever and all expense stops.

We are especially anxious to introduce "Rapid" Heaters to the Canadian trade—Our new 1911 Model "F" is the most practical and all around heater on the market.

IF YOUR JOBBER CANNOT SUPPLY YOU, WRITE DIRECT TO

RAPID HEATER COMPANY
(INCORPORATED)
GRAND RAPIDS, MICH., U.S.A.

A NEW VALVE

JENKINS BROS.'

GUN METAL AND IRON BODY

GATE VALVES

"TYPE K"

Special Features:

Highest Quality Steam Metal. Perfect Interchangeability. Double Compensating Bronze Wedges. Metal Gland in Stuffing-Box. Great Strength of All Parts. Carefully tested to 250-lbs. Water Pressure

UNRIVALLED IN DESIGN AND WORKMENSHP

A Thoroughly Reliable Gate Valve for Steam, Water, Oil, Gas or Air. A trial will convince you that it will pay you to use these valves on all your work.

Stamped with TRADE MARK like cut.

Stocked by Machinery, Hardware and Supply Dealers throughout the World.

Catalogue and Full Particulars Cheerfully Furnished on Application.

JENKINS BROS., Limited

Head Office and Works:

102 St. Remi St., Montreal, Canada

And at

95 Queen Victoria St., London, E.C.

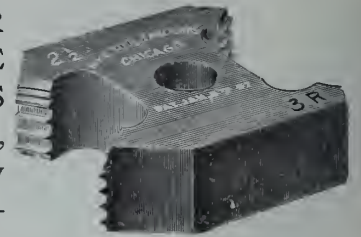


I'M
NYE
the Die
Man



I CAN'T HELP IT BOYS,---BUT---

I'VE GOT TO KEEP ON TELLIN' IT OVER AND OVER—SO LONG AS THERE ARE ANY OF YOU USERS OF PIPE DIES WHO ARE NOT USING THE NYE DIE, because I want you all to know about my wonderfully easy cutting die—a die that enables one man to do the work of two using



Threads 2½ and 3-inch Threads

the old makes—a die that takes only half the strength others require—that saves fifty per cent. in time, labor and expense—and I want you to try it—10 days free before you buy—at my risk. Ask your jobber for one to try. If he doesn't have one, ask me—"NYE," the Die Man.

THE NYE TOOL AND MACHINE WORKS
124 NORTH JEFFERSON STREET, CHICAGO, ILL.

DO YOU WANT

to buy or sell anything, to engage a clerk or secure a situation? Try a Condensed Ad. in Plumber and Steamfitter, it will bring results. Two cents per word

for first insertion one cent per word for each subsequent insertion. See page 22 for yearly rates.



Mechanics, Electricians, Anybody

interested in building will benefit by the knowledge gained from a demonstration of the use of

Star Expansion Bolts or SebcO Screw Anchors

Just tell us what kind of work you are doing and we will send samples, catalogue and instructions that will help you and show you a way to save money.

Star Expansion Bolt Co.,

CATALOGUE DEPT. 74

147-149 Cedar St., New York



Books for Plumbers and Steamfitters

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Office Edition, arranged for 250 Estimates.....	2 50
Pocket Edition, arranged for 50 Estimates.....	50
Guide to Testing Plumbing.....	25
House Drainage and Sanitary Plumbing.....	50
Johnson's Handy Manual for Plumbers and Steamfitters	1 00
Kitchen Boiler Connections.....	1 00
Mechanical Drawing for Plumbers, by R. M. Starbuck	1 50
Modern Plumbing Illustrated, by R. M. Starbuck.....	4 00
Modern Sanitary Plumbing Steam and Hot Water Heating, by J. J. Lawler.....	4 00
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Plumbing, by Gray and Ball.....	1 50
Plumbing and Lead Working.....	25
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Questions and Answers on the Theory and Practice of Sanitary Plumbing, by R. M. Starbuck.....	1 00
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Sanitary Engineering of Buildings, by W. P. Gerhard..	5 00
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Sewers and Drains, by A. Marston.....	1 00
Standard Practical Plumbing, by P. J. Davies.....	3 00
Treatment of Septic Sewage.....	50

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Dean's System of Greenhouse Heating.....	2 00
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**Write for our descriptive catalogue
of Plumbing, Heating and Sheet
Metal Working Books**

Any of the above books will be sent postpaid on receipt of price

THE MacLEAN PUBLISHING COMPANY

Technical Book Department

143-149 UNIVERSITY AVE. : : : : TORONTO, CANADA

FIVE POINTS OF EXCELLENCE!

Every Plumber and Steamfitter will do well to study the many points of excellence in the new

"KING" BOILER

—features which make for satisfaction and economy to the user and which provide the dealer with an irresistible selling talk. Here are just five leaders:

1. The KING Grate is supported in its socket in the cored base, which does away with grate ring and it is impossible to shake it from its sockets. Any section can be taken through the door very quickly, there being no bolts or nuts to be removed.
2. The KING Fire Pot is widely corrugated, increasing the area exposed to the heat and insures complete combustion of the fuel around the outside edge. The water wall which follows the line of corrugation also insures quicker circulation.
3. The KING Thin Flat Waterways situated directly over the fire absorb the intense heat quickly, and thus promote very rapid circulation; but in obtaining this desired end we have in no way sacrificed the solidity of the boiler.
4. The KING Boiler is provided with large clean-out doors which make cleaning easy. The Fire-door is wide and placed high in the fire-pot—this permits easy charging and the carrying of a deep bed of fuel. All doors are perfectly fitted.
5. The KING Boiler is absolutely guaranteed to have the capacity equal to catalogue ratings.

Exhaustive tests of every section and of the completed boiler are applied to every KING Boiler—a Boiler that embodies every point of superiority in other boilers and has effectively "Cut out all the kicks."

KING RADIATORS used in conjunction with the KING Boiler produce the most perfect heating system in the world. Actual requirements may be closely filled as the KING Boiler is being made in half sizes.

We also carry a very full range of the leading brands of Steamfitters' Supplies and Lunkenheimer Valves.

STEEL and RADIATION, LIMITED

FRASER AVENUE

TORONTO, - CANADA

AGENTS

TORONTO SHOWROOMS: MONTREAL SHOWROOMS AND
80 ADELAIDE STREET EAST SALES OFFICE: 138 CRAIG ST. WEST
KING STREET WEST
AGENCIES IN ALL THE LEADING CITIES.



Plumber and Steamfitter

and Sanitary Engineer of Canada

Published on the 1st and 15th of
each month by

THE MACLEAN PUBLISHING
COMPANY, LIMITED

Subscription - - \$1.00 per year

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Macpubco, Toronto. Atabek, London, Eng.

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H. T. HUNTER, - - - *Manager*
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J. G. LORRIMAN }

Circulating amongst Plumbers,
Steam, Hot Water and Gas Fit-
ters, Sanitary Inspectors, Heating and
Ventilating Engineers, City Engineers,
Boards of Health, Architects, etc.

TORONTO, APRIL 15, 1911

It is intended to comment at some length later on the results of the Good Friday meeting at which the Ontario Society of Sanitary and Heating Engineers was formed. Suffice it to say at present that the meeting was, in every sense, a great success. The steps taken to change the name of the organization and to provide for an examination of all members, were well calculated, we believe, to raise the status of the trade. It will take another year to perfect the ideas adopted at the meeting and there is every reason to believe that, when this has been done, the Ontario body will become a power for great good. Not only should conditions within the trade be immeasurably improved but the benefits will extend to the general public as well, in the shape of an improved standard of efficiency in sanitary and heating installation.

NEW SOCIETY IS FORMED

A New Liskeard plumbing and hardware firm are running newspaper ads in the form of a small newspaper. They report some difficulty in keeping the columns newsy. Popular opinion to the contrary, running a newspaper is not one of the easiest things in the world.

Is the steam and hot water fitter to be put out of commission? Are the days of coal consumption at an end? The inventors of a new kind of "magic carpet" claim that such will surely result from the article they are putting on the market. This magic carpet is not the kind that Arabic sorcerers could use to transport themselves from one continent to another in the winking of an eyelash. It is more practical than that, being fitted with an under network of steel wires, forming a contact and ensuring that a current of heat, generated by electricity, shall be evenly distributed in all directions. It is claimed that a room, fitted with an electric carpet, can be heated at a cost of one cent per hour. The advantages are too obvious to require mention. No more tinkering with furnace or boiler, no more coal bills, no more breaks or delays in heating. If half what is claimed for these carpets—they are of French manufacture, by the way—is true, the day is not far off when "steamfitters will cease from fitting."

MAGIC CARPET INVENTED

It sounds alright but we fancy that the heating engineer will be a valuable member of society for some time to come yet. Some wag has suggested that the principle involved in the carpet be used for the warming of the human body. This, he declares, would be made

possible by lining the clothing with wires and carrying a small storage battery in the pocket. The scope thus provided for practical jokes, however, would be too great to make this idea very widely popular.

Seriously speaking, it is possible that developments along the line of heat economy are not far off. Commenting on this problem, the Ironmonger says:

"Professor Bone and his assistants have succeeded in rendering slabs of refractory material intensely incandescent with a consumption of 10 or 12 cubic feet of gas per hour and yielding a heat three or four times as great as that of an ordinary gas fire burning the same quantity of fuel. The why and the wherefore is not yet completely understood, but some valuable developments in cheap heating by gas seem to have been achieved."

Hard work, as some one has said, is the mother of success. Luck is just a third or fourth cousin.

The plumbing business and the tinshop seem to go naturally together in the smaller places. There can be no doubt that the tinshop is more easy to manage and more liable to prove a paying venture when plumbing is also done; it is also true that the plumbing end acquires strength from the other department. Where a comparatively small business is done, there are bound to be certain times when either one of the two branches will be running slack. This difficulty can be obviated by devoting more attention to one branch when the other shows signs of slackening.

ATTENTION IS REQUIRED

It sometimes happens, however, that the plumber gives more time to the tinsmithing end than he can safely spare. The plumbing end cannot be allowed to manage itself. The profits made, or the losses sustained, on plumbing depend almost entirely on the amount of attention paid to that department. To insure profits, the business must be closely followed and ably managed. Popular conception to the contrary, plumbing is not a trade which is sure to pay fabulous returns. The plumber is not gifted with the Midas touch, which enables him to turn everything he handles into gold. On the contrary, he has to work hard for all he gets and, unless he knows the business, as well as the practical, side thoroughly, he is more apt to incur ruinous losses than fat profits.

The moral of it all is that the plumbing business requires a good knowledge of methods of business management, particularly when other departments are handled in conjunction.

At the recent convention of the master plumbers of the State of Indiana, several new ideas were put into practice which are well worth emulating. One was the appointment of a committee on distribution. The name

COMMITTEE ON DISTRIBUTION

does not give much indication of the duties of this body. Its work, in brief, was to go over each address delivered before the convention and pick out the ideas contained therein, which were deemed to be worth acting upon. These points were afterwards reintroduced to the convention in the form of resolutions and were then thrown open to discussion. The idea was found to work very well. It did away with the old custom of "referring" the president's address, and other papers, to a committee to report upon; which, as all know, is in most cases tantamount to burying the address *holus holus*. The new method results in the most salient points being brought forward and obviates the possibility of good suggestions falling to the ground without more ado.

Another point mentioned was the advisability of having a paid secretary. The idea was very favorably considered. This matter will probably come before the National Association at the annual convention at the Twin Cities this year.

Here is a conundrum, for the newness of which we do not vouch. What is the difference between a poet and a plumber? Why, the poet pipes his lay and the plumber lays his pipe, of course.

After a hard struggle with the daily problem of dirt, many a housewife has been heard to exclaim: "If the house could only be kept clean without work." This wish has been partly realized in that latest addition to the utensils of domestic sanitation—the vacuum cleaner. A house can now be cleaned most effectively with practically no effort at all.

IT HAS COME TO STAY

In the past, the home was painfully and inadequately housecleaned once a year by one-broom power and it took a week or ten days. Now the work can be done, and done right, in two days. In view of its manifold advantages, who will ask, has vacuum cleaning come to stay?

The plumber who takes up this line will find that modern life has reached the stage where the most sanitary arrangements possible are desired. Consequently, he will not find it hard work to get customers. The article in this issue, on the advisability of handling vacuum cleaners, is worth perusing.

THE METAL SITUATION.

There is an all around healthy tone to the metal market. Business is opening up splendidly and metal men are looking forward to the best year, perhaps, in the history of the country. Everything points at the present time to continued prosperity in the future. As one man put it: "Everything is bright and there is not a cloud in the sky."

One of the most satisfactory features is the steadiness in all metals. Prices are remaining firm and this is conducive of active conditions. Buyers and sellers alike feel greater confidence when a price level is steadily maintained, as the speculative element is thereby eliminated from all dealings. Metal quotations have not changed for some time now, except in tin. The tin situation has been somewhat erratic but the fluctuations

in the price have not disturbed the steady volume of trade carried on in this country. At the present time, tin is on the rise again and it is becoming more apparent every day that the syndicate is still master of the situation.

Our Visitors



A plumbers' association man through and through, is J. W. Barnes, of Port Arthur. Having gained his business experience in a city where the plumbing business was formerly much cut up, not only by local competition, but also by that of plumbers in the rival city of Fort William, he knows, to the full, the evils of disorganization in the trade. He was among the "OUR GUESTS." first in his city to recognize the necessity of a master plumbers' association, and he has put the whole weight of his energy and enthusiasm behind the scheme, ever since.

Mr. Barnes pays an annual visit to Toronto, and, during a chat with Plumber and Steamfitter, the other day, he told of the methods adopted by the Port Arthur plumbers in forming their association.

Learning from the experience of the old time associations who had failed through transgressing the law, the Port Arthur men were guided, from the very first, by competent solicitors. They studied the constitutions of every important master plumbers' association in the country, and finally evolved something which, Mr. Barnes says, is practically perfect. It provides for keeping the members in line and, at the same time, avoids the provisions of the law regarding restraint of trade.

Mr. Barnes will be one of the busiest men in the Twin Cities this June. He has been selected as chairman of the reception committee, who will look after the visiting delegates at the National Convention. If the delegates are not given a good time and made to feel at home, it will not be any fault of Mr. Barnes, for he is just the man to make good in that capacity.

Many of Plumber and Steamfitter's readers will be shaking hands with J. W. Barnes, as they step off the trains or boats at Port Arthur, and they will be sure to know him from the excellent likeness which our artist has sketched.



OFFICIAL NEWS of THE N.A.M.P. & S.E. of CANADA



Ontario Sanitary and Heating Engineers Organize

An Eventful Meeting Held at Toronto on Good Friday — New Body Will be Incorporated and Members Will Have to Pass an Examination—Important Steps Taken to Raise Status of Trade.

At a meeting of master plumbers from all parts of Ontario, held on Good Friday, in the Retail Merchants' Hall, Toronto, a provincial society was formed. The day will doubtless be remembered always as a red letter day in the history of the sanitary and heating trade. For, in addition to perfecting the organization of the new body, ideas were brought forward and put into effect which promise to revolutionize present conditions. The name of the new body was made the Ontario Society of Sanitary and Heating Engineers, and it was practically decided that all members of the organization would be required to pass an examination on vital points pertaining to the trade. This matter was left with the executive to arrange. A suggestion that a certificate be given to each member met with unanimous favor and was also passed on to the executive. The new body will be duly incorporated, and will, no doubt, attain in time to the status held by similar societies, governing professional and engineering circles. The seemingly radical measures adopted were put forward by men who have been close students of existing conditions, and were adopted by the meeting only after thorough discussion. It was felt that the time had come to break away from the methods of bygone days and to take steps to place the trade on the standing that its importance merits.

It is believed that the new name of the organization will give an improved standing to the members and at the same time more aptly designate the work that the plumber, so called, does to-day. "Plumber" means a worker in lead. To-day the plumber is a specialist in sanitation,—he does work that calls for a high degree of technical and scientific knowledge as well as skill and, in addition, he provides for the heating of

the home; in other words, he has become, in reality, a sanitary and heating engineer. The condition that all members must pass an examination before being admitted will tend to raise the standard of efficiency in the trade; the issuing of certificates, to be framed and shown in the shop of each society member, will serve to educate the public to look for and demand fully qualified work.

A Gratifying Attendance.

The attendance exceeded expectations. It is indeed difficult to get men, who are engaged in an exacting business, to appear at an organization meeting and consequently the presence of delegates from all parts of Ontario, was somewhat in the nature of a pleasing surprise.

Among those in attendance were Geo. Cooper, Toronto; R. J. Shannon, Toronto; William Mansell, Toronto; Frank Maxwell, Toronto; A. F. Passmore, Toronto; Lewis LeGrow, Toronto; G. F. Frankland, Toronto; T. M. Maxwell, Toronto; Geo. Ross, Brockville; John Eggett, London; J. Cunningham, Paris; H. F. Andrews, Orillia; H. Mahoney, Guelph; A. Malcolm, Guelph; F. Smith, Guelph; J. Marshall, Port Arthur and Fort William; Jas. Murphy, New Liskeard; H. J. Peters, Stratford; Thos. E. Henry, Stratford; J. A. Caslake, Collingwood; J. Reed, Toronto.

Opening of Proceedings.

Frank Maxwell, Toronto, was voted into the chair and the gathering was at once resolved into committee of the whole. During the hour which elapsed before adjournment for lunch an informal discussion was held during which it was amply demonstrated that evils existed which could be cured only by the formation of an influential and active association.

Harry Mahoney, Guelph, who was generally credited with being the father of the idea of a provincial association, was the first speaker. He expressed pleasure at the size of the attendance and thought that it augured well for the success of the movement. He thought that men present from different parts of the province should tell of the results of organized work in their district.

John Eggett, London, stated that they were up against a hard proposition in that city. He complained of the way in which outside manufacturing firms sent in men to figure on local contracts. He believed that the proper way for an association to be formed would be to secure a salaried organizer to do the work.

J. Marshall, from "Twin Cities," told of the splendid organization they had perfected there, and the results which had followed. He suggested that a man be secured who had been in touch with the plumbing trade for years to travel around and act as secretary and organizer. The "Twin Cities" would be willing to put up their share of the expense.

J. A. Caslake, Collingwood, told something of the price-cutting methods pursued by some of his competitors and expressed the opinion that the formation of a provincial association, would do much to remove this and kindred evils.

"Every city and town should have its own association," declared President Cooper of the National. He went on to explain that these associations should be educational bodies and suggested that a blackboard be introduced at the meetings and that problems and different phases of the work be explained thereon.

Wm. Mansell, Toronto, declared that the evils existing in the trade were due to many causes but the blame could chiefly be laid at their own door. The lack of unity of purpose in the past, the foolish cutting of prices, etc., had all contributed. He hoped that the new body would be a better association than Ontario had ever before seen.

Secretary LeGrow read from a copy of Plumber and Steamfitter, a report of the action taken at the last National convention re an Ontario body. He expressed the opinion that the formation of a provincial body was the only ultimate way of improving conditions. Then there must be local bodies as well.

Harry Mahoney thought that one of the chief benefits would be the establishment of a friendly feeling among members of the trade. When members of the trade meet on a common friendly footing, they do not indulge in ruinous price-cutting, just to oust the other fellows.

Frank Maxwell declared that in Toronto they had all the evils which existed elsewhere and a few more as well. He spoke of the need of license regulation.

Geo. Ross, Jas. Murphy, J. Cunningham, H. J. Peters, Thos. E. Henry and A. Malcolm, also spoke, voicing their entire endorsement of the need for a provincial organization.

The Afternoon Session.

At the afternoon session, which opened at 2 o'clock, a great deal of business was done. Wm. Mansell started the ball rolling by moving that a provincial body be formed. The motion received unanimous endorsement.

The election of officers for the new organization was then proceeded with, resulting as follows:

President—R. J. Shannon, Toronto.

Vice-President — J. Marshall, Twin Cities.

Secretary—G. F. Frankland, Toronto.

Treasurer—John Eggett, London.

Executive—The officers and Messrs. Ross, Cunningham, Andrews, Mahoney, Murphy, Peters, Caslake, Cherry and Mansell.

Delegates to National—R. J. Shannon and Wm. Mansell.

It was decided that each member of the executive should act as an organizer in his own district.

The membership dues were fixed at \$5 per member for each local association with not more than ten members. Locals having more than ten members will pay \$50 for the first ten and one dollar for every member over that.

The secretary was instructed to issue a circular letter to all men in the province eligible for membership, giving an account of the meeting and urging that they join.

To Hold Examinations.

An important phase of the deliberations was entered upon when Geo. Cooper propounded the suggestion that a certificate be issued to each member to be framed and hung in his shop.

This brought up the question of the name of the new organization, and Harry Mahoney made the suggestion that the

time was ripe to change the name to that of the Sanitary and Heating Engineers.

Wm. Mansell raised the point that certificates to have any value would require to be backed up by certain qualifications. If it were necessary for each member to pass an examination before receiving the certificate, then it would have the same value as in other lines. Frank Maxwell took the same view.

On the motion of Messrs. Mahoney and Caslake, it was decided to empower the executive to prepare examination papers to be submitted for approval at the next meeting.

After the examination papers have been approved, it will be necessary for each member to pass them, before being declared eligible. Certificates will then be issued to the successful ones.

New Name Adopted.

After some discussion it was unanimously decided that the new body should be known as "the Ontario Society of Sanitary and Heating Engineers," the motion to that effect being put by Messrs. Maxwell and Smith.

To be Incorporated.

This brought up the objection that there would be nothing to prevent outsiders from adopting the name as they saw fit. It was accordingly suggested that the organization be incorporated without share capital and, on a motion by Harry Mahoney, this step was decided upon.

The executive was empowered to draft by-laws and present same for confirmation.

The question of the time of the next convention was left with the executive. Toronto was selected as the place of meeting, on a motion by Messrs. Malcolm and Peters.

Made Official Organ.

On a motion by Wm. Mansell, seconded by Frank Maxwell, Plumber and Steamfitter was asked to be the official organ of the new society. Both mover and seconder spoke in very complimentary terms. "Every master plumber in the country should take it," said Mr. Mansell. "The best paper published," supplemented Mr. Maxwell.

A second motion was put by Harry Mahoney, thanking Plumber and Steamfitter for the active assistance it had rendered in bringing about the organization of the new society and for services in the past. The motion was adopted. T. B. Costain responded, thanking the members for this evidence of confidence.

Motions of thanks were passed to Secretary LeGrow of the National, who had acted as secretary for the meeting, to the Toronto Association for the use of the room, and to the outside members for their attendance at the meeting.

Notes of the Meeting.

E. J. Farrell was in Toronto, but was unable to attend.

Geo. Ross of Brockville paid his membership fee down, thus becoming the first sanitary engineer in Ontario, as Lewis LeGrow remarked.

Secretary Frankland is also secretary of the Toronto Association, and has won a name as a hard and earnest worker.

Mr. Smith of Guelph was asked to sing, but he resolutely refused.

Harry Mahoney left Toronto for Detroit, where he is to spend the holidays. Mrs. Mahoney accompanied him.

PREPARING FOR CONVENTION.

The annual convention of the National Association will be held at the Twin Cities from June 12 to 17.

The master plumbers of Port Arthur and Fort William are already preparing for the convention. They have resolved to make it the most successful in the history of the association.

An extensive advertising campaign is already under way. The personal attention is being solicited of every plumber throughout the Dominion. In order to facilitate this, letters are being addressed to each and every association, asking for a list of members, and also a list of all master plumbers in that section who are not members. When these lists have been obtained, letters will be written to every man mentioned, extending a personal invitation to attend the convention. The plan of advertising in newspapers and journals will also be followed out. Writing to the editor of Plumber and Steamfitter, J. W. Barnes, of the Barnes Hardware Co., says, "We are starting a campaign to make the convention to be held in the Twin Cities the most successful ever held in Canada."

The committees now at work are:

Entertainment and Sports Committee—J. Marshall, Ft. Arthur, and E. D. Higgenbottom, Ft. William.

Advertising and Correspondence—J. M. McRae, Ft. William and J. W. Barnes, Port Arthur.

Soliciting Committee—A. Cameron, Fort William, and W. Sime, Port Arthur.

Reception Committee—Members of the above committees and A. C. Waltz, president of the Twin City Association, is chairman of the committee.

J. Marshall, Port Arthur, was in Toronto at the Ontario meeting Good Friday. He announced that to go from Toronto by boat would cost \$25.50 return.

Arrangements were being made for special rates at the hotels. "Outside of transportation and hotel bills, visitors will find their money no good," explained Mr. Marshall, with a smile.

How One Plumber Goes After the Farm Trade

W. H. Turnbull Canvasses Brant County Thoroughly and Has Installed Plumbing and Heating Systems in Many Farmhouses — Has Branch Office in the County—Sanitation in Barns.

ANY master plumber will readily acquiesce, if you suggest that canvassing for business pays. Practically every man in the trade finds it necessary to do more or less outside work. If the plumber were to sit in his shop and just wait for the customers to come in, his business would not be very profitable. Some men, of course, have reached the stage where they do not have to look for trade but, in such cases, it is a certainty that they laid the foundation of their business firmly by aggressive methods and have strengthened the structure by competent, honest service ever since.

As stated before, most men in the trade do a certain amount of outside work. But how many try for the trade

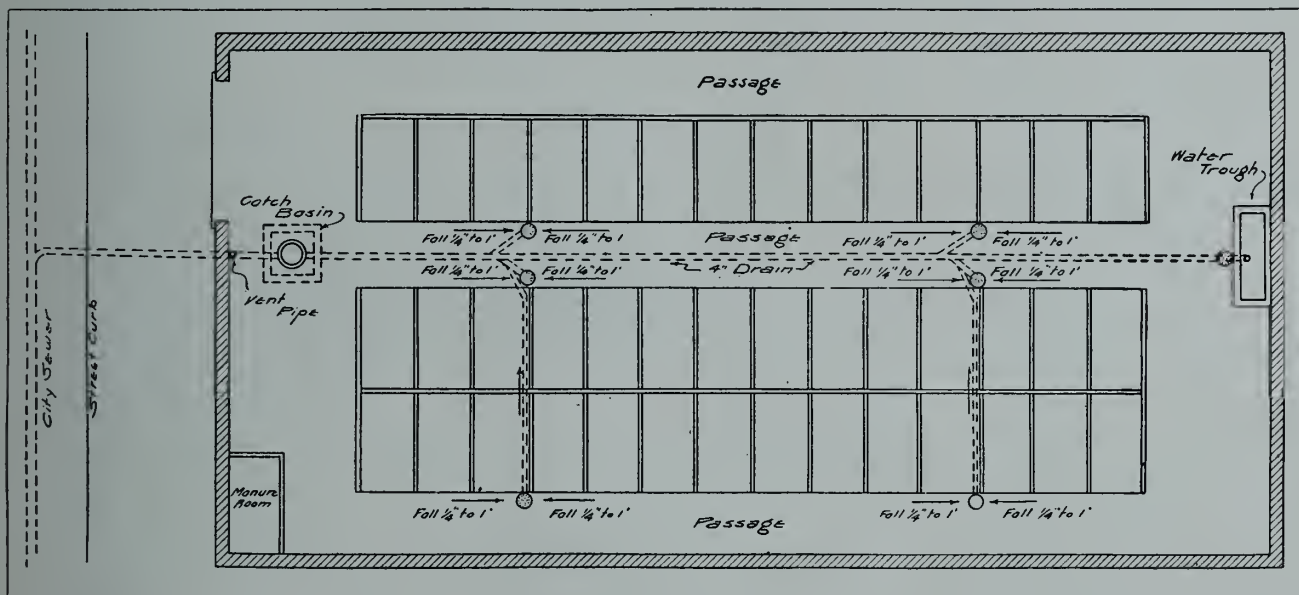
to his plumbing business, Mr. Turnbull has a stove and hardware store, and does a big business in the tinsmith line. He has a large staff and is assisted by three sons, William, John and Charles.

Many a farm house in Brant County has been fitted up by W. H. Turnbull with heating system and bathroom complete. He has established a large connection with the farmers in that connection and is ever widening it. To do this, it has been necessary to get out and meet the farmers personally and show them the advantages of household convenience. The average farmer does not, of his own accord, decide on improvements of this kind. He must be convinced of the wisdom of the step; and

ing to build a new barn in the fall or that a neighbor of theirs is thinking of putting in a modern heating system, they freely vouchsafe the information. Note is made of the matter and the "tip" is promptly followed up. The farmer in question is seen personally, even if it means a special trip out to see him. It is surprising how many farming men can be induced to invest in a modern heating and plumbing plant when the matter is properly presented.

Established a Branch.

To keep more in touch with the farm trade, a branch store was established something over a year ago at Scotland, a village about 20 miles from Brantford. It was found possible to consid-



Plan of Model Barn. Catch Basin has Grating Top. It acts as sand trap and fresh air inlet to drains under floor. Reproduced from Plumbers' Trade Journal.

of the farmer? A few, a very few have done so; and in every case, they have found that it pays them well.

The farmer is awakening to the fact that there are certain comforts which his home has lacked. The old wood heater, as a result, is giving way to the furnace or to steam and hot water systems. Bathrooms are being fitted up and telephones installed. In a short time, every comfort that modern life holds out will be possible for the farm dweller. Here, then, is a big field for the aggressive master plumber.

The Methods of One Plumber.

One plumber who believes in going after the trade of the farmer is W. H. Turnbull of Brantford, Ont. In addition

it takes a pretty forceful presentation of arguments to bring him around.

Mr. Turnbull often drives out into the nearby districts and finds what prospects there are for business in the plumbing, tinning and heating lines. His men are instructed to do what they can along the same line. When they go out to do any work, they endeavor to get the news of the district and find out who is going to build. In carrying out one contract, they generally manage to get wind of at least one more.

The same policy is observed in the store. When customers of long standing drop in, they can be depended upon to linger awhile for conversation after transacting their business. If they have heard that a farmer near Burford is go-

erably widen the scope of the plumbing and tinsmithing end of the business. A great many more contracts were secured than had ever been carried out in the past. The present manager of the branch store is J. W. Bauslaugh, who has been in charge for the past nine months.

A certain manufacturer recently paid this tribute to the efficiency of the methods of this firm: "W. H. Turnbull covers Brant County from boundary to boundary. It is very rare indeed that any business gets away before he hears of it and makes a bid."

Sanitation in Barns.

In connection with this subject there is a growing sentiment in favor of prop-

er sanitation in barns. In treating this topic, William Hay read an interesting paper at the sixth annual convention of the American Society of Inspectors of Plumbing and Sanitary Engineers, as follows:—

It is unnecessary to go into details regarding the spread of disease caused by flies, rats, etc. "A man's foes shall be they of his own household," is a good science as well as scripture. The fly is a domestic animal and household pet, whether we are proud to acknowledge it or not.

Man's refuse, or that of his domestic animals, is absolutely necessary to the development of the fly. Science also informs us that rats are the cause of the spreading of bubonic plague by the carrying of infected fleas. The keynote is to destroy the breeding places of flies, rats and other vermin, as far as possible, and the only way to eliminate such menaces to health is to destroy the cause.

be clean. These are the considerations for a sanitary barn. They are obtained by—

Providing full water-tight floors of non-absorbent material, sloped to secure proper drainage.

Requiring that rat-proof bins be installed in all barns for the purpose of storing feed.

Requiring that no food material of any kind, with the exception of canned goods, be stored or kept in such buildings.

Requiring that air-tight manure rooms or boxes be provided inside of such buildings, same to be ventilated by an air shaft or flue with an area equal to 120 square inches. Contents of boxes to be removed at least once a week.

Providing that horses or cattle shall not be kept on any floor except the ground floor in any building, except a Class A building, the ground floor not

stalls for the horses to stand on, said slat floor to be made the same as a cellar door, divided in the centre of stall, and provided with hinges so same may be raised and cleaned out.

Drainage.—The enclosed cut, with a few remarks, will be self explanatory. The object in having a catch basin is to have a grating for a cover so as to wash wagons, etc., over same. This would act as a sand trap and also as a fresh air inlet to drains under floor. The stall drains have no traps, only a steel strainer, so same could be removed and drain flushed with a hose. These, too, should act as fresh air inlets, as the main drain and branch lines run through the roof.

An Important Factor in Barn Construction.—As barns are generally built of inflammable material, as well as stored with same, the following provision should be made to guard against fire: Requiring better buildings than are generally erected for this purpose. Prohibiting candles, oil lamps or gas lights (unless protected by screens), and by having all electric wires run in conduits. Installing stand pipes with hose and reels in different parts of the building.

HEALTH PROBLEM UP.

Strathcona.—The much-debated step has been taken by the board of health and if the council takes kindly to the proposition this year will see many property owners compelled to instal water and sewer connections where considered possible. At a meeting of the board yesterday morning the subject was taken up and compulsory connection with water and sewer lines was finally endorsed as the only solution of the sanitation problem and a resolution was drafted in forcible terms for the consideration of the city fathers. This resolution reads:

"That connection with the water and sewer systems be made compulsory wherever possible along streets where these systems are installed. That this board considers this matter is the most important action which may be taken with a view of improving the sanitary conditions. And we would urge that the council take up this proposal at once"

Board Investigating.

It is understood the attention of the City Health Department officials has been called to a case where an alderman's firm did a plumbing repair job on the premises of another alderman without obtaining a permit therefor, and that a portion of the work was done by a workman not having a journeyman's license. It is likely the matter will come up before the board at its next meeting.—Halifax Echo.

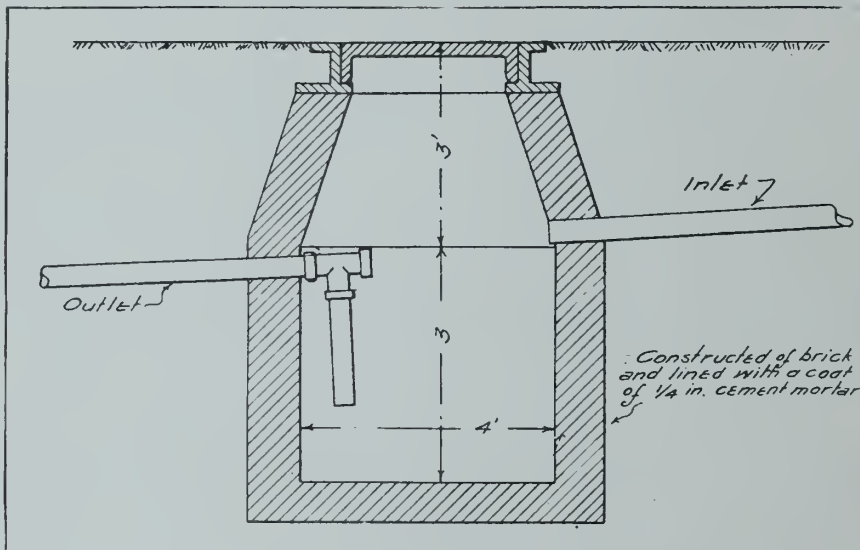


Figure 2.—Reproduced from Plumbers' Trade Journal.

Hence the necessity of sanitary regulation in the construction and care of barns. The first principle of sanitation is sunlight and air. The air space should be regulated in accordance with the number of animals; five hundred to one thousand cubic feet of air space should be required for each animal. Cubic air space is not an important factor in the ventilation, but there is a certain minimum space required for each animal which must never be disregarded. Floor space must be considered as mere cubic space.

In a stable, each horse or cow should have 100 square feet of floor space (climate should be taken into consideration). A horse should have 1,600 cubic feet of air space and a cow not less than 1,200. As cows are usually kept to furnish milk for food, it is important that they should be kept in a healthy condition and that the air around them

to be more than five feet below nor five feet above the street grade, so as to provide light and ventilation.

Requiring that there shall be at least one opening direct to a street or to the other open area, which said exit shall be at least eight feet in width for every 2,500 square feet of floor area. All aisles shall be at least six feet in width and shall be kept free from all obstruction which may tend to prevent animals from escaping in case of fire.

Veterinary surgeons that I have consulted about standing of horses on cement floors seem to disagree; some stating that cement floors are injurious to the horses, and others claim that no harm is caused. Cement is about the best material for barn floors; asphalt, etc., being practically useless on account of the action of urines on such material.

The above difference of opinion can be overcome by allowing wooden slats in

Plumbers Should Handle Vacuum Cleaners

The Demand for Vacuum Systems is Gradually on the Increase—How Stationary Cleaners Are Installed—Methods Adopted by Western Plumber to Get Business—Some Effective Arguments.

IN this progressive age, new ideas take hold rapidly. The luxury of yesterday is the necessity of to-day. People are quick to grasp the possibilities and enjoy the benefits of the new things that man's inventive ingenuity places on the market.

It is not so long ago that people began to understand first what a "vacuum cleaner" was. And yet to-day it is recognized by all as a most desirable thing. Soon—and the time is very close indeed—the vacuum cleaner will be regarded as absolutely essential in the house; just as necessary, in fact, as a range for cooking, or lights for illumination purposes. This is bound to come to pass, because the vacuum cleaner has every advantage from the standpoint of sanitation and economy. It enables the housewife to keep the home spotless and free from dust and it protects the carpets and rugs from the ravages of the carpet beater.

But what has all this to do with the plumber and his business? Simply this, that the installation of vacuum cleaning systems is right in the plumber's line and he ought to reach out for his just share of the trade. The plumber is the engineer of domestic sanitation. The vacuum cleaner is, above all else, a sanitary contrivance. It follows, then, that the plumber is the man to whom the public will naturally look when the installation of vacuum systems is regarded as quite as necessary as the installation of bathroom equipment. If the plumber has failed to grasp the opportunity and allowed the business to drift into other hands, he will lose what would have proven one of the most profitable branches of his business.

Stationary Systems.

At the present time the stationary vacuum cleaner is fighting its way into recognition as a valuable feature of every public building and large homes. It is being installed to some extent in schools and is found invaluable as a ready means of keeping the rooms clean and free of dust.

School installations have been made for the most part by plumbing firms. Bennett & Wright, Toronto, hold the agency for a vacuum cleaner firm, and have put systems into a number of Toronto schools. They have found it a valuable side-line.

How to Instal Cleaner.

The electric cleaner is installed in a new building at the same time as the

plumbing and heating—another reason why the plumber is the man to do the work. It is set up in the basement of the building and a suction pipe connected up with the different floors. It is very easily done, particularly in houses where there is a laundry chute. All that is required to be done is to run an iron pipe in one corner of the laundry chute with a "T" opposite the opening into the chute on each floor. It would be necessary to ream the opening in the pipe smoothly, so that the air hose ferrule would fit in tightly. An ordinary garden hose could be used for the purpose, the length depending, of course, on the size of the house and the position of the laundry chute.

If the installation is being made in a house in course of erection, a more effective job can be done. The pipe can then be run up in a central place in the house, with a projection through the wall on each floor.

Up to the present, manufacturers of vacuum cleaners have concentrated largely on hand cleaners. Now, however, it is being recognized that there is a big field for the electric cleaner and a big effort will be made to push them. This is the "cue" for the plumber to appear on the scene. By a little canvassing work among his customers it should not be difficult to secure orders for cleaning systems. The mechanical end would present no difficulties for the practical plumber; the work, in fact, would be right in his line.

How One Order Was Received.

Readers may not be convinced that "it should not be difficult to secure orders for cleaning systems." They may think it hard enough to get orders for plumbing and heating, without putting time to any side-lines. There are, however, good reasons for the statement made. It is only necessary to convince the prospective customer that the new cleaner will actually do the work claimed for it, to effect a sale. The results of a test are so striking that the value of the machine is at once apparent.

Here is how one western plumber secured a contract to instal a vacuum system in a public school. He had canvassed several members of the board and had received only scant attention. They "opined" that the janitor could keep the school clean; that was what he was paid to do. Finally, the plumber proposed a test and managed to get a

few members of the board to accompany him to the school in question after school hours. They started in on a room which the janitor had just swept out. The cleaner was used systematically on all parts of the floor and walls and the board members soon received ocular proof that the janitor and his broom had just "hit the high spots." Dust was drawn from the crevices and crannies of wall and floor by the irresistible suction force of the machine and the room was left cleaner and fresher than it could ever be after the visit of the most assiduous janitor that ever wielded broom. Then they visited a room which had not been touched, and the amount of debris drawn in through the tubes literally astounded the board members. "Where's all the stuff coming from?" asked one. "This school has only been built ten years," asserted another. "Didn't think a place could get so dirty in that length of time."

Well, to make a long story short, the board decided to have a vacuum cleaning system put in and they have since been so pleased with the results that all the schools in the place will soon be similarly equipped.

Did you ever stop to consider that the dread white plague originates, in a great majority of cases, during childhood years? What is more conducive to consumption than the dust-laden air found in school rooms, the impurities in which arise from the unclean condition of floor and walls? This consideration, alone, should be sufficient to convince any school board of the wisdom of installing a vacuum system.

The Housewife's Friend.

The vacuum cleaner, from the standpoint of the housewife, is one of the greatest labor-savers ever invented. No more painful manipulation of the back-breaking broom, no more laborious household upheavals during the annual spring house-cleaning time; the vacuum cleaner will do it all, with no labor on the part of the operator.

Then there is the economical standpoint. In some homes it is not uncommon to find curtains for one window costing several hundred dollars. The money spent in carpets and rugs would make the cost of a vacuum cleaner look insignificant. And yet the vacuum cleaner will save the fresh appearance of the carpets and rugs and prolong their life for many years.

Some Criticisms of Plumbing Advertisements

Some Splendid Samples of Ads. Are Shown—The Wisdom of Using Illustrations Demonstrated — Should Cuts be Used in Small Space?

BELOW are shown a number of plumbing ads. gleaned from newspapers in all parts of the country. On the whole, they are exceptionally good. The reading matter is pointed and convincing and the general appearance attractive. Two of the ads, at least, are among the best that the writer has ever passed upon. It cannot be said that there is one poor advertisement in the group.

Patmore Bros., Cranbrook, B.C., have one of the most ambitious plumbing ads. that the writer has yet had the pleasure of seeing. The space used is exceptionally large—11 inches 3 columns wide is a lot for plumber to take—and, on the whole, pretty good use has been made out of it. The lay-out of the ad. is good, the illustration is clear and attractive and the reading matter to the point. There are some faults, but they are not big ones. The underlining has been almost robbed of usefulness, for the simple reason that it has been overworked. Underline one word, or two, or even three, and they stand right out from the body of the type, but un-

derline ten words or phrases, as in this ad., and much of the significance is lost.

The Hunt Plumbing Co., London, have a good jobbing ad. The drawing is in some respects crude, but it expresses the desired point and fits in with the reading matter. On the whole, a fairly effective little ad.

W. B. & H. R. Sime, Port Arthur, Ont., have an ad. somewhat along the same line. The illustration is designed to attract every eye, every male eye at any rate, and to—but enough, quite enough, on that score. The reading matter, that accompanies it, is pointedly forcible and follows its line of argument out well.

City Plumbing and Heating Store, Wetaskiwin, have an ad. here which the writer does not feel called upon to criticize. It is, in fact, modelled on a suggestion made in these columns some time ago for a mid-winter plumbing advertisement. The lay-out of the ad. is not just what the writer had in mind when he made the suggestion but it is hoped that the City Plumbing and Heating Co. found it effective.

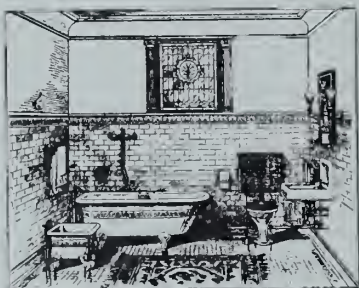
H. G. Hagen & Co., Sydney, C.B., have worked along aggressive lines but not with the best possible results. The lay-out would have been improved, if the space beneath the cut had been utilized. Then the printer has shown poor judgment in using no less than four distinct styles of type. The text of the ad. is forcible and convincing.

Norman N. Walker, Grimsby, Ont., has one of the best plumbing ads yet encountered. The lay-out is attractive, and the reading matter exceptionally well prepared. The printer has done his work quite well but has fallen off somewhat in using the hedgerow border which surrounds the ad. The inner rule border would have been quite sufficient.

Taking it from nearly every standpoint, this is the kind of an advertisement, which is bound to bring results.

John Conley, Renfrew, has a neat little ad. here with a telling line of argument. The phraseology may be a little too strong to be really effective. "Old style den of filth and disease, called by favor only a bathroom," is surely a more vigorous denunciation than the circumstances would call for. However, no harm is done and the ad. talks right out in a manner calculated to convince the reader.

John Lewis & Co., Belleville, Ont., groups his arguments around a good cen-



You are going to build a Home

Then you are interested in a Heating and Plumbing System. Our Name Plate on your Toilet Room or on your Heating System is an evidence that we are not ashamed of our work. It also means that the Goods as well as the working qualities are guaranteed. We believe that our firm is better calculated to securing satisfactory results in the installation of Plumbing and Heating than any other concern. Our work is quoted as the Standard of Quality all over the District covering installations from the Landing to Lethbridge.

The Winning of a Standard Reputation

is a great achievement in these days. It cost us lots of hard painstaking work but the result is a recognition of our Quality.

And it pays—pays us and pays you—

Are You Going To Give Us Your Contract?

Patmore Bros.

Heating and Plumbing Engineers.

Leaking Again!

Why not send for us and put your plumbing in good repair

THE HUNT PLUMBING CO.
Phone 1213.
Richmond and Kent Streets.
LONDON, ONT.



The Woman Who Escapes

from the inconvenience of old-fashioned plumbing is to be congratulated. YOU may escape by letting us install modern plumbing conveniences in your home. Bath room plungers, hot water heaters and all kinds of modern plumbing—we do this work we give you greatest skill and most careful attention.

W. B. & H. R. SIME
Next New Ontario Hotel, Port Arthur, Ontario

Do You Need A Plumber

If your water pipes are frozen up, or the heating system in your home is working poorly, you should phone 215. I give immediate attention.

City Plumbing and Heating Store
Pearce Street East



H. G. Hagen & Co.

OF COURSE

Anyone one in Sydney will tell you that good Plumbing is assured if we do the work. We employ only skilled workmen and guarantee satisfaction. The best of PLUMBER'S SUPPLIES can always be found here in large quantities at attractive prices.

GET OUR ESTIMATE.

PLUMBING

Good Plumbing Is Not a Luxury

It is an absolute necessity if you would care to take the full enjoyment of living. We can install every plumbing detail, or Correct Faulty Plumbing.

Our workmen are very proficient and will cause you very little inconvenience in repair work. Should you have any plumbing to be done you will save time and money by attending to it at once.

Norman M. Walker
PLUMBING AND HEATING
Opposite Post Office, Grimsby



When Cleaning Day Comes

You will find a very sound and forcible reason, why a tiled bath room, a porcelainized tub and open plumbing is more to be preferred to the old style den of filth and disease, called by favor only a bathroom. If you are a landlord you will find your tenants will rent easier with modern open plumbing. If you own your own home you will find increased comfort and convenience will amply repay the outlay.

JOHN CONLEY

Plumbing, Hot Water and Steam Heating.
Opposite Padwa's, Phase 41.



THE HOUSEWIFE'S DELIGHT—

That's a well-appointed kitchen. We make this possible. The plumbing is the most important item in a modern kitchen, and our work is the most modern and most reliable you can get.

John Lewis & Co.

A LEWITT,
1796, 8th Ave.

FAIRVIEW PLUMBING CO.

PLUMBERS
2132 Granville Street,
Vancouver, B. C.
Estimates Furnished
Phone 5518

tral idea. A well-appointed kitchen is, undoubtedly, the housewife's delight and suggestions tending in that direction are bound to enlist her interest. The layout is not good, however. Is it not a mistake to put such a large cut in such

a small space? There is practically no room left for the reading matter.

Fairview Plumbing Co., Vancouver, have a neat card, which presents all the facts necessary.

Municipality to Install Plumbing Systems

Fort William Will Use Power Granted by Legislature to Put in Plumbing and Collect From Owners, Spreading the Payments Over a Period of Years.

At the last session of the Ontario Legislature, representatives of Fort William made application for legislation which would give the municipality power to install plumbing in houses where the owner was not in a position to do this at his own cost, or where he is unwilling to do so. The necessary legislation was secured, power being granted to hold charges, encountered in this way, against the property and to collect from time to time, just as sewer taxes are collected to-day. The idea is to spread the payments over a period of years, as in the case of cement walks and other local improvements.

The new regulations will probably be brought into effect in Fort William in the very near future. The delay at present is chiefly on account of the need for a special by-law to provide for the outlay of city funds in this way.

Commenting on the matter, the Fort William Herald says:

Speaking of this new power which has been granted to the City of Fort William, Mr. Norman T. Cronkhite, the manager of the Plumbing and Engineering Supply Company Limited, expresses his hope that the sooner the power thus granted to the city of Fort William was made use of the better for the general weal of the community.

"We have amongst us a very large number of people who have never been used to modern plumbing conveniences," said Mr. Cronkhite, "and the sooner we force these sort of necessities on these people the better for all. A complete plumbing system can be installed for about one hundred and sixty dollars, and for about forty dollars a bath and boiler can be added to this. At this price there is no reason why the number of houses, even in the heart of the city should be without plumbing."

The new regulations will probably be brought into effect in Fort William in the very near future, and, in fact, the delay is chiefly on account of the need for a special money by-law, which will provide for the additional outlay of the city's funds that may be occasioned in this way.

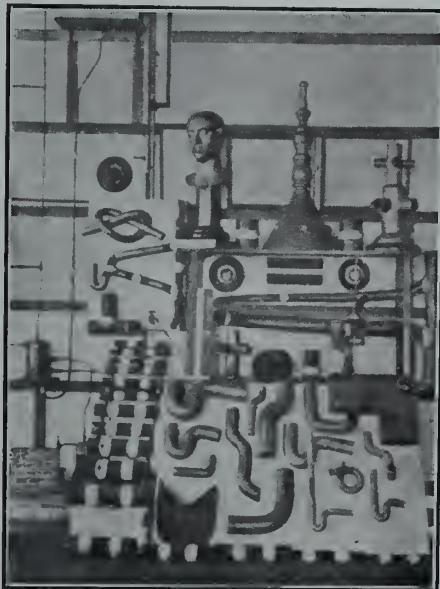
That it will be a step toward the advancement of the general interests of the

municipality is the opinion of almost all. Then the man who has a vacant lot will be in a better position to go ahead with his building, knowing that he will not be hampered by the presence in his immediate vicinity of some vile smelling and unsanitary method of sewage disposal. The sharing of the burden of maintenance of the water and sewer systems of the city will be more general and will not press so heavily on the citizens who are already helping to pay for this part of the city's upkeep.

SAMPLES OF WORK.

Technical education is taking a great hold in Australia and in all parts of that great Island Dominion, plumbing classes are being conducted with considerable success.

The accompanying illustration, showing samples of students' work, is from

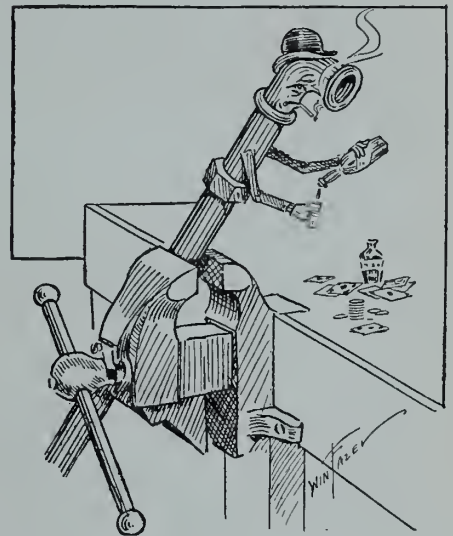


Specimens of Student's Work.

a photograph forwarded to "Plumbing and Heating" by G. Morton, instructor of the plumbing class at the Adelaide School of Mines. The photograph was taken on the end wall of the class-room, but was shown at the Chamber of Manufacturers' 1910 Exhibition, where a number of students received silver and

bronze medals and certificates of merit for their respective parts of the work. The 8 branch piece is by a student 18 years of age, bossed from one piece of 5 lb. sheet lead 3 ft. 6 in. diameter, stands 25½ in. high above wood base. The head is bossed from 5 lbs. lead, 3 ft. 5 in. in diameter, by student 21 years of age. The drum-shaped piece is bossed from 5 lbs. lead, 7 in. diameter by 7 in. high with a 2 in. pipe in centre, by student 19 years of age.

Plumbers will agree that lads who were capable of turning out work of that description would make splendid apprentices.



In The Grip of Vice.

TO AMEND PLUMBING BY-LAW.

Halifax.—At a meeting of the Board of Health, Dr. MacAulay gave notice of motion as follows:

"Resolved that by-law No. 2, of the City Health Board be amended by adding thereto the following after section 60 thereof: 60 (a) notwithstanding any of the provisions of this by-law, any licensed plumber may employ a practical plumber for the purpose of doing and performing any plumbing work in the city and it shall not be necessary for such practical plumber while working in the employ of a duly licensed plumber to have the certificate required by section 49."

To Hear Plumbers.

The motion will be considered at the next meeting and the plumbers will likely be given a hearing. If the resolution is adopted it upsets the present condition which requires that only journeymen plumbers who have passed examination for such and received a certificate may be sent out to do plumbing work in the city. The opinion of the city engineer and solicitor as to the proposed change will be had.



The Question Box



Subscribers are Urged to Send Questions to be Answered, or to Comment on Letters Published. Descriptions of Jobs Done or Shop Kinks are Also Invited.

THE EFFECT OF UNREAMED PIPES.

Editor Plumber and Steamfitter,— Sometimes in some of the tees and ells on a certain job there is an unpleasant clicking noise at times. The slant on the pipes seems to be all right and I am at a loss to account for the reason of this clicking mentioned. Perhaps you can suggest the reason in the next issue of the paper?

Woodstock, March 30. "NOISE."

In order to show what we believe to be one of the reasons, we have had a simple drawing made which should tell its own story. In the horizontal pipe



This Shows the Effect of Reaming the Pipe.



Showing the Length of the Cold Water Tube.

"A"—"B", take notice of the manner in which the ends of the pipe are finished up on the inside as shown through the respective ells. At point "A" it will be seen that the pipe was not reamed and the slight dam that would ensue can readily be imagined. Provided that it was upon a straight run of main it would be all the worse. On the contrary the open passage at point "B" can be observed and the ease with which the water or steam might pass. The slight clicking noise might also come from the manner in which the job was fixed as to the expansion, or rather the lack of expansion. We suggest these points for investigation. There is small reason why pipes should go unreamed, other than the carelessness on the part

of the mechanic. Reamers can be obtained that will do the job at the same time that the thread is being cut, if one cares to do it in that way. On the smaller pipes the want of reaming will sometimes reduce the size of the pipe nearly or quite one-half.—D. C. H.

COLD WATER TUBE IN RANGE BOILER.

Editor Plumber and Steamfitter,— Will you be kind enough to tell me if there is any regular length that the pipe that feeds the cold water into the range boiler should be cut?

Vancouver, April 5. J. I. C.

We believe that some plumbers have a regular length that they use in cutting this particular pipe. However, we do not think that it should be figured in that manner as it might bring the pipe either too long or too short, according to the relation in height that the boiler and water hack bore to each other. We believe that you should figure to have the pipe of such a length that the end of it would be three or four inches above the level of the water hack. The hole in the pipe at the point shown by the arrow might get stopped up and if the boiler should ever then siphon, it could not siphon the water out of the water back. The cross on the drawing shows the point to which some plumbers frequently run this pipe. As the usual hook up occurs, we believe that we have shown the pipe at about the right length by the dotted line in the drawing.

The plumber should exercise a little common sense in these matters and not expect the same length to work alike on all jobs. Some never seem to give the matter any thought, however, any more than they would in setting a kitchen sink. For years the sink has been set at the same height totally, regardless of the stature of the woman who had to use the sink.—D.C.H.

THE DURHAM SYSTEM.

Editor Plumber and Steamfitter,—I frequently see the words "Durham System" in reading the plumbing papers. Will you please explain to one who would like to know, what this system is?

CURIOUS.

Toronto, April 10.

The Durham System is a system of piping with recessed fittings and is put together with galvanized or tar coated wrought-iron pipes or steel pipes. The system is used very extensively in many of the larger cities. One of the advantages claimed for it is that, having screw joints, they will not work loose, as it is claimed that the caulked joints sometimes do under certain occasions.—D.C.H.

HEATING SPECIFICATIONS.

Toronto, April 11.—Quite a stir has been created here by statements in The Evening Telegram that contracts for heating in certain schools of the city had not been carried out according to the specifications. The paper alleged that in four of the schools the number of square feet of heating surface was only 31,696, while it should have been 45,138. The summary given was as follows:

	Amount Supplied	Amount Specified
Queen Alexandra	17,250	10,000
Brown School	3,500	2,118
Kent School	16,200	13,311
Fraunkland School	8,188	6,267
Totals	45,138	31,696
Number of square feet short		13,442

Fred Armstrong, who had the contract for Queen Alexandra school, is quoted as saying that, "We carried out our contract under instructions from the office of the superintendent of buildings."

When Mr. Bishop, Superintendent of Buildings, was asked about the matter, he called his assistant, Mr. A. D. Waste. Mr. Armstrong, who was also present, said: "An opportunity was presented to install pipe coils instead of the square feet radiator that was specified. More effective heating is given by the pipe coils."

Merely Change in Construction.

Mr. Waste said: "The variation is in form of construction. It affords greater facility for the results, and the work is practically of the same value." He said a great variety of heating systems had been tried out in the schools, the idea being to get the best.



POINTS ON HEATING

by
CHAS. H. DENISON



Chapter 6.

Not so very long ago I had a friend come to me and the way that he went to it and spilled language was something fierce. He was badly rattled at the amount of coal that his recently install-steam heating job was making away with and wanted me to visit the installation to see if I could put him next to the difficulty.

When I came to look the plant over I said, "What are you running the fire so like blazes for? Where are the checks to the draft, for the fire needs slowing down." He did not know how to do it, and there were no checks balanced nor any damper in the chimney, or smoke pipe, I suppose I should say, to speak more to the mark. "The fitter never told us anything about it," said my friend, and there you are. When the job is completed, it's on to the next, regardless of how much the owner may or may not know in regard to the proper care of the job. "Oh, it will take you a year or more to learn just how to run the thing," is what the owner is generally told. Now I claim that such a proceeding is all wrong and moreover it results in much misunderstanding for if the owner gets in the habit of running the job after a wrong manner, he is more than liable to keep it up, much to the discomfort of everybody around the premises.

So it is a wise proceeding to start the owner out correctly at the very start and then the chances are that he will continue along the right road. We often hear the question, "Well, how much coal will it take to heat a six (or perhaps it was a ten) room house?" Now, the writer does not intend to go into the heat unit question at this place, but we will try and take it up in some visible manner. Suppose that it happened to be the ten-room house and that said house had been warmed with coal stoves before the steam or hot water heating plant had been installed? How many tons of coal did it take to warm the house for the previous season? How many tons of coal does the new plant consume in the course of the season? Is it greater, or less? If greater, then I am bound to say that there is some

thing about that particular heating plant that needs looking after, and the sooner it is tended to, the sooner will the fuel consumption be cut down. So (to resume what I started in with), I took the time to show my friend how to build a fire and how to manage it afterwards. I want to say that if I had to spend a whole week, in order to school the proper one to manage the apparatus, I believe that it would be cheaper, than to have to go back and monkey around trying to "square things" with the angry owner. So I believe that it is a good thing to give most through instruction and if the rules for running the apparatus do not seem to be enough get out a set for your own firm and fasten them up in some prominent place in the basement or the boiler room.

Get Out Set of Rules.

Said rules to contain full directions for running the fire and more in particular as to the personal care and welfare of the whole plant. "Keep the ash pit clean and flues free from soot and the fire pot full of coal," we all know that. There is a whole lot more than that to the care of the apparatus. Take the smoke pipe off, at the close of the heating season, and store it in some dry place. The smoke pipe will last at least twice as long, if so treated, as it will if left on the boiler all summer. In order to keep the apparatus in good shape, keep the hot water system full of water all the time. Do not draw off the water permanently when the job is out of commission for the air will badly rust the boiler and pipes on the inside. Some one once said, "Paint the iron work of the boiler with kerosene (to prevent rusting)," and ever since as regularly as the tax collector and the spring time comes, that paragraph is sure to pop up from some point or other. Paint the boiler with some good paint, especially used for iron; or if you can't spend the time swab some kind of grease on the iron, a piece of fat meat if nothing better.

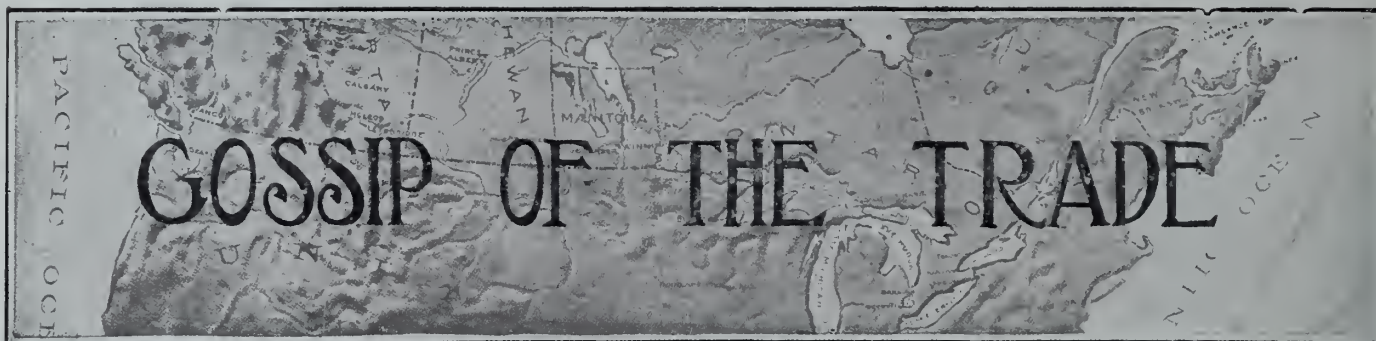
On a steam job the boiler should be filled when the season is over, and after treating the boiler as advised previously, allow the doors to remain open in-

stead of shutting them tightly as is done many times.

Bring in a Little Change.

Now a lot of these suggestions are not new "dope" by any manner of means, but the same old mistakes, the same indifference and the same kicks come across the highway of life as the same old seasons pass by. Why not start out this year and make one last effort to see if it is not possible to wring in a little change, for the sake of variety, if nothing more? Did you ever take the pains to tell the housewife not to take a damp cloth when she has an industrious fit and washes off the radiator, but use a duster or vacuum cleaner? Or do you desire to see the radiators go on the blink, anyway, so that you will have the job of doing them over the next spring? There is a little trick in closing down a steam valve and I wonder if you have ever taken the time and trouble to explain it to any of your customers? If that valve is sent home with the force of a regular twist-er, it will not be so very long before you will be called upon to make some repairs. A good radiator valve does not require so very much strength to close it down properly, and while on the subject do not allow the valves to be shut all summer on the job.

It does not take much time (really none at all, extra) if you watch your time and chance as the job progresses under installation to get about all the information to the owner as he sort of hangs around watching you. Some fitters get cranky as sin, if the owner comes along and asks a question or two and take the occasion to exhibit their independence (put it ignorance rather), by either not answering at all, or giving a surly reply. It is on just such seemingly small points that the life and the business turn and the journey thereof becomes as on a pavement of macadam or the bumps over a corduroy road. This series was called points on heating, and it will also have some points on selling, on installing and, in order to do your hearts good, it will have some points on common human sense also, which I am bound to say is needed in a great many places in this craft and business of ours.



Erecting New Shop.

Charles T. Bull, plumber, St. Thomas, is erecting a new shop on Hiawatha street, on the site formerly occupied by the Electric Laundry.

Filters for Schools.

The Toronto Board of Education has awarded a contract for water filters in all schools at a cost of \$25 each and two hundred water retainers and coolers at \$9.60 each.

Goes to Buffalo.

Frank O'Reilly, plumber, Niagara-on-Lake, has moved with his family to Buffalo. He will be greatly missed by the firemen of that place, having held the position of brigade secretary for some years.

The Chair or the Man?

Martin Smith, a plumber employed in St. Thomas, met with a serious accident. He was coming down a flight of stairs in Penwarden Block, with a chair on his shoulders, when he fell, breaking the back. Killingsworth, corner of Ross and Wellington streets, set the broken back with glue.

Organizer on Tour.

J. W. Bruce, the general organizer of the United Plumbers and Gas Fitters, has begun an organizing tour which will take him from Toronto to Victoria, B. C. Trade conditions all through the West are reported to be active.

Boosting the Plumbers.

In an industrial number of the Port Arthur News, mention is made of some of the plumbing firms in the city. Among the firms mentioned are Marshall & Co., Barnes Plumbing Co., and O. J. Diegan & Co.

Goes to Berlin.

David Jamieson, who has been employed for some time by Bernhardt & Gies, Preston, is leaving them to start in the plumbing business on his own account in Berlin. Before leaving he was presented with a gold-headed umbrella and an address. The presentation was made by Miss Harris and the address was read by W. A. Spalding.

Building Tin Shop.

H. W. Gross, Fort George, has purchased the tinsmithing tools and equip-

ment of A. B. Clark and within a few weeks will open business in the tin and sheet metal working line. A 20 by 40 building on Central Avenue, will be built by Mr. Gross, the contract for which has already been let. An active season in the tinsmithing line is expected.

Purchase Third Truck.

The Bennett & Wright Co., Toronto, have purchased their third motor truck, a 3-ton Commer auto truck.

Starting a Business.

E. P. Paudin, Dauphin, Man., is starting in the plumbing, heating and tinsmithing business at Regina, Sask.

A Business Started.

J. W. Glover and J. W. Sutherland have opened a plumbing and tinsmith shop at Penticton, under the firm name of Glover & Sutherland, the latter being in charge of the business.

Now Established.

F. A. Cowan & Son, formerly of Toronto, are now established at No. 201 Twenty-Seventh street, Saskatoon. They are starting an energetic campaign for business.

City Will Have Gas.

The city council of Edmonton has finally decided upon the terms of the agreement with the International Heating and Lighting Co., Cleveland, for a franchise to manufacture and distribute artificial gas.

Struck by Crane.

James Martin, a steamfitter, met with a serious accident at the western dry dock, Port Arthur. In some way, he got in the road of one of the cranes and was knocked down and internally injured. He is doing as well as could be expected.

Booklet on Valves.

Plumber and Steamfitter is in receipt of a booklet on "Air Valves for Steam Heating Systems: How Used, Why Used, Where Used," by W. H. Wake-man, sent out by Domestic Engineering. It deals with the subject in a very comprehensive and exhaustive manner.

Has Been Successful.

It is asserted that the central heating plant at Brandon, Man., has proven quite a success. It was the first heating plant of the kind installed in that province

and at first was looked upon as a dangerous venture. Now, however, lots of applications are being received for extension of the mains.

Moves to New Shop.

H. Wolfhard, a leading plumber and hardwareman of Berlin, Ont., has moved to more modern and spacious quarters at 17 King street west. The new store will include space on two floors. The firm goes largely into tinsmithing as well.

Want Higher Wages.

The journeymen plumbers of Hamilton, Ont., are asking for an increase in the minimum wage from 37½ cents to 40 cents an hour. It is intimated that the men will have some difficulty in getting this increase, as the master plumbers object to paying the poor workmen the same wages as the good ones receive.

To Get Pure Water.

Through the efforts of Dominion Superintendent George Ross, a plant has been installed in the attic of the Toronto General Post-office, by means of which a pure distilled water supply will be assured to the several hundred men employed there. The pipes run to all parts of the building, and the surplus will be bottled and chilled in a refrigerator and sent to the different postal stations.

Union Organized.

W. Parker, organizer for the Federation of Labor, with the assistance of Mr. Bruce, the union's international official at Toronto, has organized a branch of the Plumbers' Union in Guelph. The following officers were elected: E. Billings, president; E. Simmons, vice-president; H. Jeans, fin. secretary; R. Anderson, treasurer and B. Rundle, door-keeper.

Brothers Start Business.

Daniel and John MacDermid, both natives of Stratford, Ontario, are starting in business there together. John MacDermid has been in the plumbing business with various firms in that city for about twenty years. Daniel has been away for the last six years, and, during that time, he has attended technical schools on plumbing, sanitation, etc. He will be business manager of the firm, while his brother will act as superintendent of work.

Has Big Contracts.

S. P. Gourlay, plumber, of St. Catharines and Welland, has the contract for the plumbing and heating of the new Welland clubhouse, which represents over \$2,000. He also has the contract for the plumbing work on the new dredge now being built by Beatty & Sons for the Dominion Dredging Co., at Welland.

Open Shop Now.

A news despatch from Lethbridge, Alta., reads:—"The builders' strike is over. All trades union men, even the plumbers, who threatened to stay out, returned to work this morning on the wages offered by contractors. No agreements were signed, as the contractors adhere to the open shop."

A New Overflow.

The Westport Manufacturing and Plating Co., Ottawa, has sent out a folder, illustrating the use of the E. N. O. Bath Waste and Overflow. The new idea is explained as follows: "This fixture is made of large solid brass tubing and heavy castings—all highly nickel plated. The 'Clean Out' has forty teeth set at right angles and is of pure, solid Aluminum which is absolutely non-corrosive and will last forever. The 'Clean Out' works perfectly on any bath—whether directly against wall or away from it, being adjustable to either end of bath fitting in a moment."

News Brieflets.

A young man employed by a Guelph plumber was brought before the police magistrate the other day, charged with the theft of some tools. He was given a severe lecture and allowed to return to work.

Mrs. Charles Gringer, Guelph, mother of E. B. Gringer, the plumber, died on Wednesday at his home.

H. W. Gross has purchased the tin-smithing tools and equipment of A. B. Clark, Fort George, and will start in business in a few weeks in the tin and sheet metal working line.

W. C. Bennett recently opened a plumbing and tinshop at 373 King street, Kingston.

W. A. Fish, tinsmith, Richmond, Que., is giving up business.

Wright & Johnson have started a tin-smithing business in Winnipeg.

Gallagher & Walker have started a plumbing business at Weyburn, Sask.

The tinsmith shop of G. S. Smail, Lang, Sask., has been sold to Joe Rimner.

Knudson Bros., tinsmiths, Norwood, Man., have been succeeded by the Norwood Heating Co.

D. McClatchie, Hemmingford, has opened a tinshop in Ormstown, Ont. He has moved there with his family.

F. R. Abernethy has succeeded to the plumbing and tin-smithing business of F. E. Colling, Wainwright.

The Regina Trading Co., Regina, have disposed of their tin-smithing department to the Greater Regina Sheet Metal Works.

W. G. Maguire, Toronto, has secured the contract for installing a sprinkler fire protection system at Lansdowne school, contract price \$777.

Fred Grieve, plumber and steamfitter, Orangeville, has gone to Leamington, Ontario, where he has secured a position. He will move his family later on.

K. W. Fessenden, Waterloo, Que., has sold his plumbing and tinning stock and utensils to W. Dixon of Foster. He will go to Foster and work for Mr. Dixon.

Making Patterns for the Tin Shop

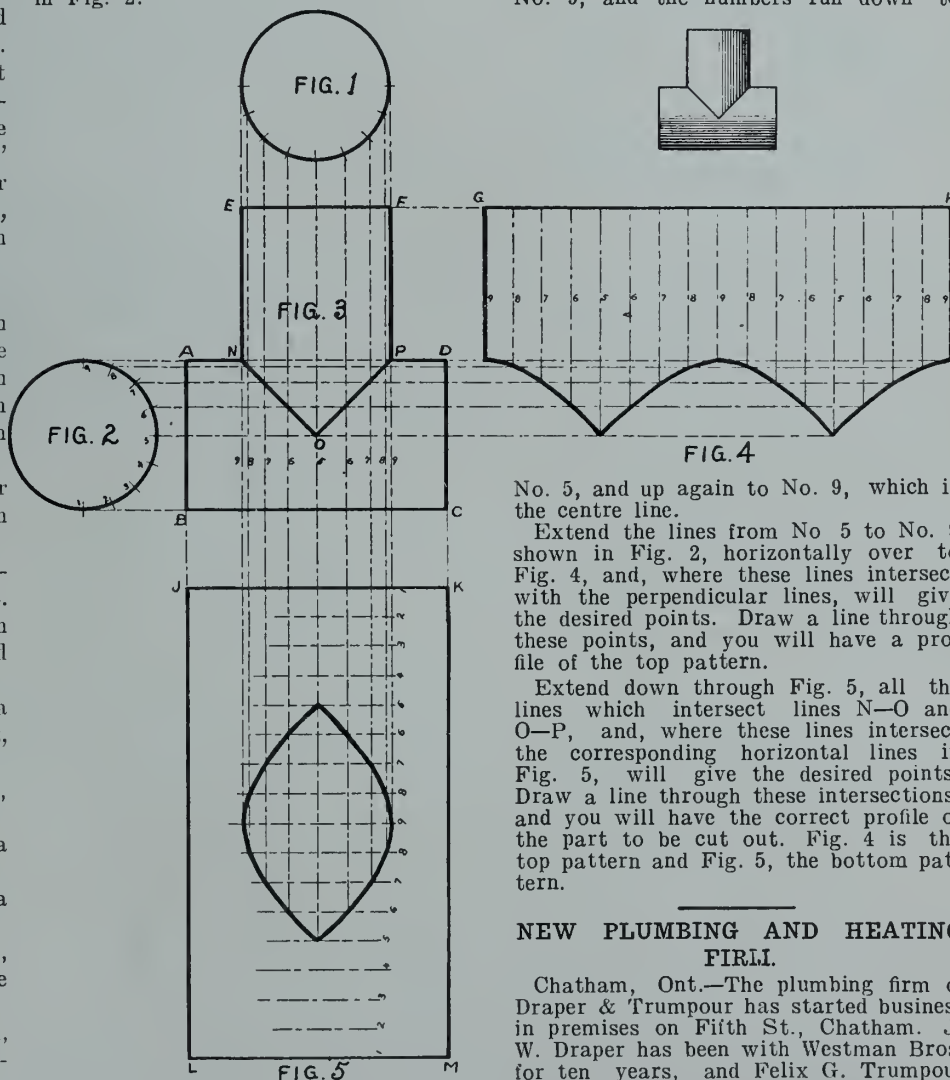
Problem: How to Make Pattern for a T Joint—Pipes of the Same Diameter.

By Wm. J. Finnigan.

The first step to be taken in solving this problem, is to describe a circle of the required diameter, as shown in Fig. 2. Extend the outside lines of this circle horizontally over to A—D, and B—C. Then draw an elevation of the joint, as in Fig. 3, and describe the circle as shown in Fig. 1, within the lines extended from N—E and P—F. Care should be taken that the diameter of the circle in Fig. 1 is the same as in Fig. 2.

Extend the lines A, B and D—C, down to L and M in Fig. 5. Set off the same equal spaces as you have in Fig. 2, No. 9 coming directly in the centre, and the numbers running both ways down to No. 1. Draw these lines horizontally, as shown.

Extend the line E—F over to G—H in Fig. 4, and set off the same equal spaces that you have in Fig. 5. Notice that the two outside lines are marked No. 9, and the numbers run down to



Pattern for T Joint—Pipes Being the Same Diameter.

Divide the inside half of the circle in Fig. 2, into eight equal parts. It is not absolutely necessary to have eight parts, but this is a convenient number, and is the same as shown in Fig. 2.

No. 5, and up again to No. 9, which is the centre line.

Extend the lines from No. 5 to No. 9 shown in Fig. 2, horizontally over to Fig. 4, and, where these lines intersect with the perpendicular lines, will give the desired points. Draw a line through these points, and you will have a profile of the top pattern.

Extend down through Fig. 5, all the lines which intersect lines N—O and O—P, and, where these lines intersect the corresponding horizontal lines in Fig. 5, will give the desired points. Draw a line through these intersections, and you will have the correct profile of the part to be cut out. Fig. 4 is the top pattern and Fig. 5, the bottom pattern.

NEW PLUMBING AND HEATING FIRM.

Chatham, Ont.—The plumbing firm of Draper & Trumpour has started business in premises on Fifth St., Chatham. J. W. Draper has been with Westman Bros. for ten years, and Felix G. Trumpour with the same firm for seven years. Draper & Trumpour will handle plumbing and sheet metal work, tin-smithing, and the installation of heating appliances of all kinds. The new firm has already secured a contract from Wm. Gray & Sons, Ltd., for the installation of a complete ventilating system in their factory.

PLUMBING AND HEATING MARKETS

MONTREAL.

Montreal, April 13.—It is apparent from reports received that the year promises much for the plumbing trade. So far business has been good and as the finer weather has approached business has shown its effects by a general briskness. One of those intimate with the trade recently stated that from present prospects one of the best year's experienced is just opening. The future will decide this, but just now there is quite a lot of work offering. Contracts are coming forward in a satisfactory manner and the trade have begun to feel the effects of the new business. Heating work is not as brisk, although there is considerable of it being done.

Enamelware.—There is a good demand for enamelware, but it is expected to improve as the season opens into what is expected of it. Those who follow prospects of new business claim that there is every reason to expect a bright year and this feeling of satisfaction seems to be general.

Plumbing Supplies.—As one of the side issues of the plumbing demand this department is coming in for a good deal of interest. The season is rather young yet, but even now there is a fair demand.

Radiators.—This department is a little easy just now, but is saved by a certain amount of trade that is moving.

Solder.—This article is in good demand owing to the extent of plumbing business. Prices quoted are king solder 26 cents, strictly solder 25c; commercial 24c, and whiting 24c.

Metals.—There is a keen demand for tin with the market continuing strong. Some of the jobbers believe that an advance is probable although only offering a guess at a probability. Copper and lead are practically unchanged and spelter is in much the same position as before reported.

TORONTO.

Toronto.—The advance of spring and the arrival of favorable weather conditions, have resulted in a brisk demand for plumbing and heating supplies from this city. While there has been some demand from provincial points, business seems to be opening up more slowly. The frost is not yet out of the ground, and this retards to some extent the commencement of building operations. Still, the volume of trade, taking it all around, has been quite satisfactory and the supply houses have been quite as busy as they expected to be at this season of the year.

Enamelware.—Orders for all varieties of enamelware have been pouring in, particularly from the city. Enquiries

have also been numerous and there is every evidence of a rapidly growing demand. Prices remain the same.

Boilers and Radiators.—There is considerable activity in heating lines; much more in fact, than is customary at this early season. The number of enquiries received points to the fact that a brisk season is ahead.

Soil Pipe.—The small advance quoted a fortnight ago has been maintained. The discount on heavy and medium soil pipe stands at 70 and 10. A discount of 50 per cent. is still allowed on the 4 and 8 inch sizes. Some difficulty is reported in securing light soil pipe, but the demand is very small.

Lead Pipe.—There is a good demand. Lead waste is quoted at 9c per lb., with a 30 per cent. discount. Caulking lead is quoted at 4½c. per lb.; traps and bends show a discount of 50 per cent.

Iron Pipe and Fittings.—There is a brisk tone, although as yet the demand has not reached to full spring proportions. Cast iron fittings range from 65 to 75 per cent. Malleable fittings stand at 37½ to 40 per cent. Cast iron bushings are 70 and malleable run all the way from 65 to 70. Nipples remain firm at 75 and 10, but 67½ is allowed by some firms on headers, while others still quote 60 and 10. Flanged unions stand at 70; malleable-lipped unions, 65 to 67½c.; galvanized pipe, \$6.18; black pipe, 1-inch size, \$4.54.

Solder.—Prices in solder remain firm. Half-and-half is to-day sold at 25c and wiping is quoted from 21c to 22c. The demand is improving briskly.

CREED OF ASSOCIATION MEN.

What should be the creed of the N. A. M. P. and S. F.? It should be that we believe in the work we do and endeavor to do our best for each other, as well as for ourselves. We ought to believe in working, not in waiting; in laughing, not in weeping; in boosting, not in knocking. We should believe in the work we have to do to-day and the work we have to do to-morrow and in the reward that the future holds out for those who do their last contract right and honest. We should believe in courtesy, in kindness, in generosity, in good cheer, in friendship and in honest competition.

One way to attain the fulfillment of these beliefs is for all plumbers and steamfitters to become members of an association. I think that the time has come for all master plumbers to consider this question in their spare time. If all individual firms and companies in our craft would get together, we would soon stamp out many of the evils now existing. We cannot afford to avoid the responsibilities and duties incidental to a

common cause. There are in this broad Dominion, many master plumbers who still hold aloof, but who should be assisting us in the work and to such I extend a hearty invitation to join us. When the convention of the N. A. M. P. is held in the later part of May, or the first week in June in that growing city of the west, Port Arthur, we hope to see plumbers and steamfitters present from the north, east, south and west, and that we will put the association on such a good, firm basis that in years to come, we will be able to look back and say that in 1911, we "built better than we knew."

GEO. H. COOPER.



R. J. Shannon, First President of the Ontario Society of Sanitary and Heating Engineers and Ontario Vice-President of the National Association.

INVENTS NEW FOUNTAIN.

Halifax, April 8.—Wm. Morrissey, the City Plumbing Inspector, is somewhat of a genius. During the time he was inspecting the city school buildings plumbing, it struck him that a sanitary drinking fountain would be an improvement that would benefit the children. He thought the matter out and it is understood he has arrived at an idea that he thinks will meet the requirements and do away with the use of the mug. The principle is a small ball attached to the water pipe at the side of the sink. Within the ball is a filtering arrangement and the water passes through the filter and up to a small opening in the ball, from which opening the pupil drinks. Automatically the exterior of the ball is washed continually and the material of which it is made is such that disease may not linger there, even if the washing process were absent.



IMPERIAL

CONVINCING PROOF

of superiority and unqualified approval of the "NATIONAL" and "IMPERIAL" Closet combinations, is in the ever increasing demand we are receiving for these goods.

Try us with an order and be convinced.

Complete line of Plumbing Supplies and prompt shipments made.

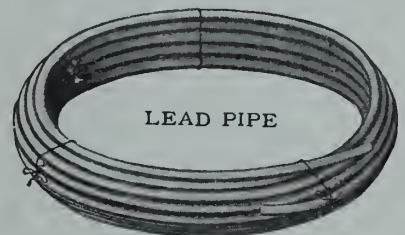
THE NATIONAL PLUMBING SUPPLY CO., LIMITED

191-193 Adelaide St. West, TORONTO

'TIS TIME WE TWAIN

DID SHOW OURSELVES I' THE FIELD.

ANTONY AND CLEOPATRA



LEAD PIPE

We Manufacture Plumbers' Supplies.

WRITE YOUR REQUIREMENTS.

The Canada Metal Co. Limited,

Toronto

CAST IRON FITTINGS

Being manufacturers of Cast Iron Fittings exclusively, we are naturally in a position to give quality the first place, which accounts for the high standard maintained.



That our fittings are being recognized by the trade as a standard is proven by our largely increased sales which have made the installation of additional machinery necessary.

Standard Fitting & Valve Co., Ltd. - Guelph, Ont.

To the Manufacturer or Wholesaler—

If it were possible to employ a traveller who could call on thousands of the best dealers all through Canada every week, what salary would you figure he'd be worth—even supposing he did nothing more than go in and shake hands with these dealers, under such circumstances they'd be glad to see him.

Would he be worth \$200, \$300 or \$500 per week? Many a house would pretty nearly let him fix his own salary.

Equip an advertisement in this paper with a verbal handshake for every dealer in Canada, and a frank, brief, pointed talk about your goods and you add a traveller to your staff who will make thousands of calls a week for you at a salary of \$4 to \$8 a week—less than you would pay a first-class stenographer.

Of course this traveller won't displace any of your regular salesmen, but he will help them to sell more goods and open up more new accounts.

Condensed or "Want" Ads.

MISCELLANEOUS.

ADDING TYPEWRITERS write, add or subtract in one operation. Elliott Fisher, Limited, Room 314, Stair Building, Toronto.

ACCURATE COST KEEPING IS EASY if you have a Day Cost Keeper. It automatically records actual time spent on each operation down to the decimal fraction of an hour. Several operations of jobs can be recorded on one card. For small firms we recommend this as an excellent combination—employees' time register and cost keeper. Whether you employ a few or hundreds of hands, we can supply you with a machine suited to your requirements. Write for catalog. International Time Recording Company of Canada, Limited; office and factory, 29 Alice Street, Toronto.

COPELAND-CHATTERSON SYSTEMS—Simple. Adapted to all classes of business. Copeland-Chatterson-Crain, Ltd., Toronto and Ottawa. (tf)

COUNTER CHECK BOOKS.—Write us to-day for samples. We are manufacturers of the famous Sirev Non-Smut Duplicating and Triplicating Counter Check Books and Single Carbon Pads in all varieties. Dominion Register Co., Ltd., Toronto.

COUNTER CHECK BOOKS—Especially made for the plumbing and steamfitting trade. Not made by a trust. Send us samples of what you are using—we'll send you right prices. Our holder with patent carbon attachment has no equal on the market. Samples for binders and monthly account systems. Business Systems, Limited, Manufacturing Stationers, Toronto.

DOUBLE your floor space. An Otis-Fensom hand-power elevator will double your floor space, enable you to use that upper floor either as stock room or as extra selling space, at the same time increasing space on your ground floor. Costs only \$70. Write for catalogue "B." The Otis-Fensom Elevator Co., Traders Bank Building, Toronto. (tf)

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FIRE INSURANCE. INSURE IN THE HARTFORD. Agencies everywhere in Canada. (tf)

MAKE MONEY AND SAVE MONEY with the Multigraph. It does multiple typewriting and reel printing. 1200 to 5000 sheets an hour, gets new business with form letters or oriented advertising, saves 25% to 75% of printer's charges on stationery and forms. American Multigraph Sales Co., Ltd., 129 Bay St., Toronto.

MOORE'S Non-Leakable Fountain Pens. If you have fountain pen troubles of your own, the best remedy is to go to your stationer and purchase from him a Moore's Non-Leakable Fountain Pen. This is the one pen that gives universal satisfaction and it costs no more than you pay for one now as good. Price \$2.50 and upwards. W. J. GAGE & CO., Ltd., Toronto, Sole Agents for Canada.

INDISPENSABLE in Office, Store, Home—Canadian Almanac 1911—a National Directory. Complete classified information on every subject of Dominion interest. Full postage, customs, banking, insurance, legal, educational, newspaper, army, clerical, governmental, particulars of leading institutions and societies. Paper covers. 60c.; cloth leather back, 75c. All stationers, or sent postpaid on receipt of price by The Copp-Clark Co., Ltd., Toronto.

KAY'S FURNITURE CATALOGUE No. 306 contains 160 pages of fine half-tone engravings of newest designs in Carpets, Rugs, Furniture, Draperies, Wall Papers and Pottery with cash prices. Write for a copy—it's free. John Kay Company, Limited, 36 King St. West, Toronto.

WAREHOUSE AND FACTORY HEATING SYSTEMS. Taylor-Forbes Company, Limited. Supplied by the trade throughout Canada.

MODERN FIREPROOF CONSTRUCTION. Our system of reinforced concrete work, as successfully used in many of Canada's largest buildings, gives better results at lower cost. "A strong statement" you will say. Write us and let us prove our claims. That's fair. Leach Concrete Co., Limited, 100 King St. West, Toronto.

PENS—The very best Pens made are those manufactured by William Mitchell Pens, Limited, London, England. W. J. Gage & Co., Limited, Toronto, are sole agents for Canada. Ask your stationer for a 25c. assorted box of Mitchell's Pens and find the pen to suit you.

RETAIL MERCHANTS AND OTHERS with a limited correspondence will find it to their advantage to write us for catalogue of special bargains in rebuilt Typewriters. We have all the well known makes, taken as part payment on the Monarch, and at the prices we offer them they are remarkable bargains. The Monarch Typewriter Company, Ltd., 46 Adelaide Street West, Toronto, Ont.

THE "Kalamazoo" Loose Leaf Binder is the only binder that will hold just as many sheets as you actually require and no more. The back is flexible, writing surface flat, alignment perfect. It cannot get out of order. No exposed metal parts or complicated mechanism. Write for booklet. Warwick Bros. & Rutter, Ltd., King and Spadina, Toronto.

THE money you are now losing through not having a National Cash Register would pay its cost in a short time. Write us for proof. The National Cash Register Co., 285 Yonge St., Toronto.

ARTICLES FOR SALE.

FOR SALE—18 school or factory Closets, Wolff's H7740, bowl H7755; 16 5" x 4" TY's X.H., 24" long; 1 slate urinal, complete with tank, 20 ft. long, no floor slab, Wolff's H8720; 3 drinking fountains, Wolff's 6940. These fixtures were used but a short time and are in excellent shape, they cost about \$800. Will sell in bulk or in part, anything like a reasonable offer will be considered. T. J. MINNES & CO., Brantford, Canada. (9)

BOOKS FOR PLUMBERS.

PRACTICAL HINTS ON JOINT WIPING, for beginners in plumbing. This book contains two original articles on joint wiping by experts, together with a selection of letters and articles on various important phases of the subject. 66 pages, 41 illustrations. Price 25c.

MACLEAN PUBLISHING CO., Technical Book Dept., 143-149 University Avenue, Toronto.

THE WANT AD.

The want ad. has grown from a little used force in business life, into one of the great necessities of the present day.

Business men nowadays turn to the "want ad" as a matter of course for a hundred small services.

The want ad. gets work for workers and workers for work.

It gets clerks for employers and finds employers for clerks. It brings together buyer and seller, and enables them to do business though they may be thousands of miles apart.

The "want ad." is the great force in the small affairs and incidents of daily life.

Keep in mind the dominant fact that mankind from its first appearance on the earth has been schooled by nature to look for signs; for invitations to taste; for suggestions as to what to wear. Tell your story briefly, forcibly, truthfully, and address it through the proper media and you can successfully apply advertising as a means to increased distribution.



Vulcan-Bijaws

(The Improved "Vulcan")

Not a Gamble!

We are anxious to have you understand what you are getting in "Vulcan-Bijaws."

The tools are made by the pioneers in Chain Tool business. The experience of years is crowded into the "Vulcan-Bijaws."

1. **THE OPERATION:** Same as old "Vulcan" tool—nothing new to learn.
2. **THE LIFE:** The reversible jaws provide double service of any similar tool.
3. **THE STRENGTH:** Auxiliary bolt provides for accident emergencies and strength of tool is vastly increased.
4. **THE QUALITY:** Unequalled and every part fully guaranteed, same as "Vulcan."
5. **THE PRICE:** Same as for old style non-reversible jaw-tool, of "Vulcan" quality.

Consult your dealer

J. H. Williams & Co.

Superior Drop-Forgings

77 Richards Street

BROOKLYN

NEW YORK

DIRECTORY OF MANUFACTURERS

Plumber and Steamfitter receives, from time to time, enquiries for the names of manufacturers of various lines. These enquiries come from firms who usually intimate they have looked through Plumber and Steamfitter but cannot find any firm advertising the line in question. In many cases these firms are anxious to secure the information at once. This page enables manufacturers to keep constantly before the trade lines which it would not pay to advertise in larger space.

EMERY WHEELS.



Canadian Hart Wheels

442 Barton St. East, Hamilton

Corundum and Emery Wheels
Grinding Machines, Beaver
Oil Stones.

SHELF BRACKETS.



Will Hold Up a Shelf

That's what a shelf bracket's for
For this purpose there can be
NOTHING BETTER, NOTHING
CHEAPER than the BRADLEY STEEL
BRACKET. It is well Japanned, Strong and
Light. The saving on freight is a good profit
aside from the lower price at which the goods
are sold. Order direct or through your jobber.

ATLAS MFG. CO., NEW HAVEN

FILTERS.

Anti-Splash Tap Fitters

The "Galvo" Filter and Water Steriliser
"Perfection" Fire Extinguishers

There's good money in them for hardware dealers.
Write for Prices.

The Anti-Splash Filter Co.
OWEN SOUND, ONTARIO

MANUFACTURERS' AGENTS.

The Manufacturers Sales Co.
MONTREAL

Frederick H. Reid, Manager

Representing manufacturers of high-class specialties,
including "Handhook," "So-Clean," and others.

We are open at any time to receive propositions from
first-class manufacturers who wish to be represented in
Canada. Write at once. Best of references.

MANUFACTURERS' AGENTS.

Western Distributors, Limited
CUSTOMS BROKERS

Wholesale Commission Merchants and Manu-
facturers' Agents. Cars Distributed, Warehoused
and Forwarded. Warehouse on Trans-
fer Track. Business solicited.

OUR POSITION IS YOUR OPPORTUNITY
SASKATOON, WESTERN CANADA

BRONZE POWDERS

BRONZE LIQUIDS

The
Canadian Bronze
Powder Works
Montreal Toronto
Works, Valleyfield

Send us your orders and we guarantee the
quality



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INVESTIGATION

Get in line and let us prove
to you that the

GENUINE
Armstrong Stocks and Dies

ARE THE BEST.

Catalogue on request.



The Armstrong Mfg. Co.

317 Knowlton St.

Bridgeport, Conn.

When writing advertisers kindly men-
tion having seen the advertisement in
this paper.

TINSMITHS' HELPER AND PATTERN BOOKS



A useful handbook for Tinnerns and Sheet Metal
Workers. It treats the simpler problems in pattern
cutting occurring daily in the shop besides giving tables
and information constantly needed by the mechanic.

Section 1—DIAGRAMS and PATTERNS. Demonstrates
50 examples of pattern work, such as cutting flared tin-
ware, elbow patterns, etc.

Section 2—EPITOME OF MENSURATION. Describes
how to find the area and circumference of a circle, con-
tents of a sphere, etc.

Section 3—TABLES, RULES and RECIPES. Gives the
weights of sheet metals, capacity of cans, recipes for
mixing solders, cements, etc.

Price \$1.

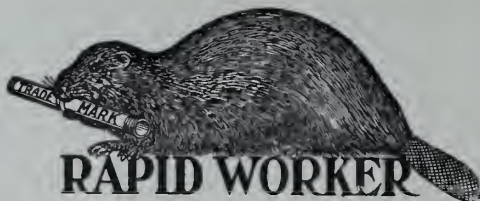
53 Figures

MacLean Publishing Company

Technical Book Dept. 143-149 University Ave., Toronto, Can.

Nature has solved the
problem of distribution.
It uses a multitude of
agents to effect the distri-
bution of its products.

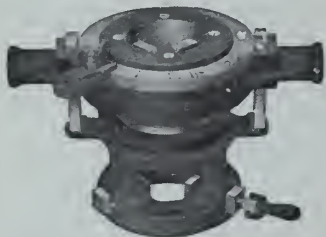
Nature does not expect
every seed to fall upon fal-
low ground and to take
root. But, it achieves a
profitable percentage upon
its distribution. This is all
that an advertiser has to
do to reap a profitable
harvest on his outlay.



One man with a Beaver Die Stock is worth two or three men with any other Die Stock made.

"Beaver" Adjustable Die Stocks

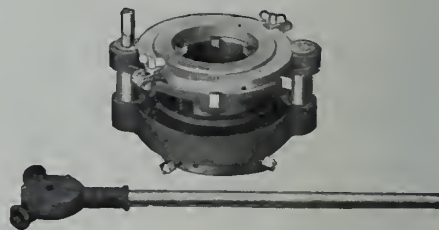
HAVE cut the cost of pipe threading in two because they will thread all sizes of pipe without changing dies. They are built on the receding principle which positively enables one man to thread any size of pipe and produce absolutely tight joints for all work, including hot water. They save the time formerly used up in changing dies and looking after loose parts, and eliminate all of thread-stripping when backing off.



No. 25A, threading 1, 1½, 2-inch pipe.
A boy can operate it.



No. 6, threading ¼, ½, ¾ inch, complet



No. 60. Uses two sets of dies. One set cuts 2½, 3, 3½ in. the other cuts 4, 4½, 5, 6 in.; they are inserted without removing any parts.

No loose Bushings or loose Dies on No 25A and No 6, and they cut 1, 1¼, 1½ and 2-inch pipes.
We can furnish a separate set of dies for 1, 1¼, 1½ and 2-inch pipe

Write us for Illustrated Price Lists.

BORDEN CANADIAN COMPANY,
66 Richmond Street East Toronto, Ontario

*The Largest
Brass Factory
in Canada*



is at work all the time producing a full range of

Plumbers' Supplies and Brass Goods

and our special facilities enable us to make prompt shipment. Our goods are noted for their superior finish, accurate fitting and quality of the castings, and are a line that never fails to give every satisfaction

We also make the famous EMPIRE CLOSET—the kind that has banished all 'kicks' from customers, and we specialize on self-closing fixtures—"Empress" brand for Hotels, Public Buildings, etc.

Shipment Made Date Order is Received.

Empire Manufacturing Co., Limited, London, Ontario

QUICK SHIPMENTS

When you come to think of it, a delayed shipment from your jobber may mean lost business.

Don't risk it—buy your supplies from a firm that carries really adequate stocks. Under the name of

“Scotia” Plumbing Supplies

we carry an enormous and splendidly assorted stock of the most reliable goods made in the world. We can generally ship immediately, on receipt of order, anything from a washer to a complete bathroom outfit.

*Test us. Our prices are as low
as reliable quality permits.*

Wm. Stairs, Son & Morrow, Ltd.

HAFIFAX

NOVA SCOTIA

Established A.D. 1810



TESTED---TRIED AND NOT FOUND WANTING!

No test which ingenuity or skill can devise has been omitted to assure ourselves of the perfection of each

“Sovereign” Radiator

They are guaranteed absolutely non-leakable and never fail to add to the reputation of every dealer who is handling them.

Made in a large variety of styles and designs, they fit handily into any vacant space in store, office or home.

Send for Booklet and Particulars

TAYLOR-FORBES CO., LTD.

HEAD OFFICE AND WORKS—GUELPH, ONT.

Taylor-Forbes Co., Ltd., 246 Craig St. W., Montreal, Que. Taylor-Forbes Co., Ltd., 1070 Homer St., Vancouver, B.C. W. R. Mathers, 46 Princess St., St. John, N.B. The Vulcan Iron Works, Winnipeg, Man. The Mechanics Supply Company, Quebec, Que.



*Sovereign
Monarch*



Modern Lavatories



The "Victorian" Semi-Porcelain Lavatory here illustrated represents the most up-to-date sanitary fixture of the kind. It's like a piece of table chinaware, made durable, and very strong for bathroom and lavatory requirements.

All corners rounded off and decorative mouldings dispensed with, ensuring highest hygienic qualities and perfection in design.

These Goods are Fully Guaranteed Not to Craze

Made in an assortment of sizes for side wall or corner. If you want the latest thing out, ask for the "Victorian."

The Jas. Morrison Brass Mfg. Co., Limited

93-97 Adelaide Street West, TORONTO

No. 854--Improved "Victorian" Pedestal Lavatory.

SUPPLY

"Kerr" Radiator Valves

on your heating work, and
your valve troubles are over

The

Kerr Engine

Co., Limited

Walkerville - Ontario

*We charge the
price and furnish
the reliable goods*

Look for
Our Name
"KERR"
on All
Genuine
KERR
VALVES



DART UNIONS

THE plumber who uses
Dart Unions never
loses time or money
through leaky joints. Dart
Unions are seated on both
sections with smoothly ground bronze,
making a

Bronze to Bronze Ball Joint

that simply cannot leak because it cannot
rust, corrode or become accidentally
loosened.

See for yourself--ask your
dealer or write to us for a sam-
ple Dart Union.

Dart Union Co., Ltd.

NIAGARA ST., TORONTO

PLUMBER & STEAMFITTER

and Sanitary Engineer of Canada

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TORONTO, 143-149 University Ave.

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Vol. V

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No. 9

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Plate F. 141

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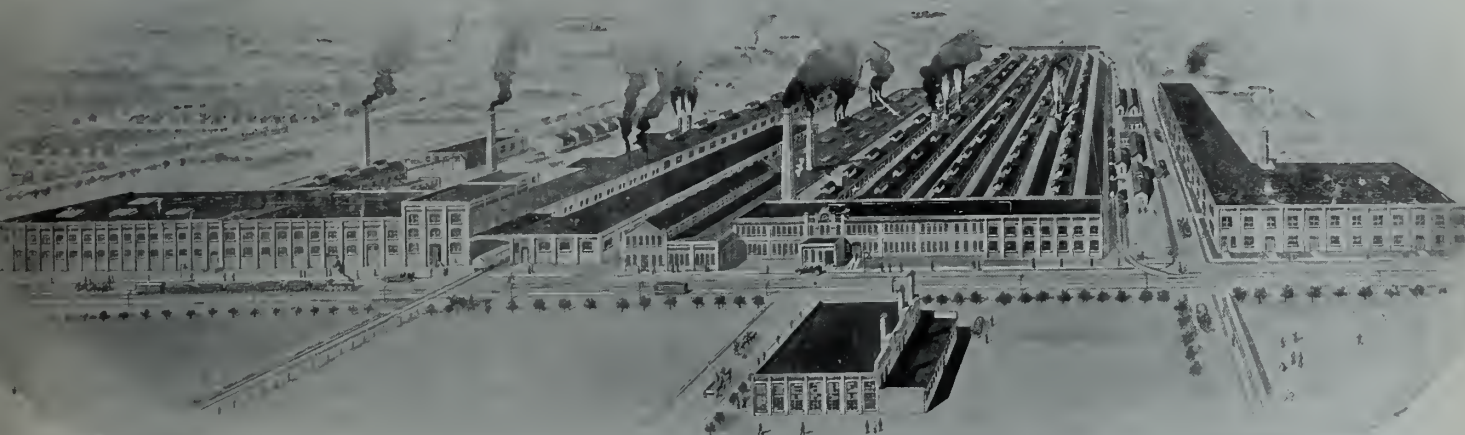
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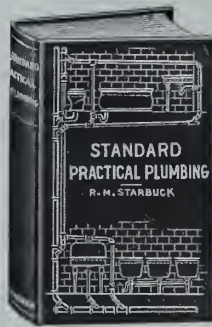
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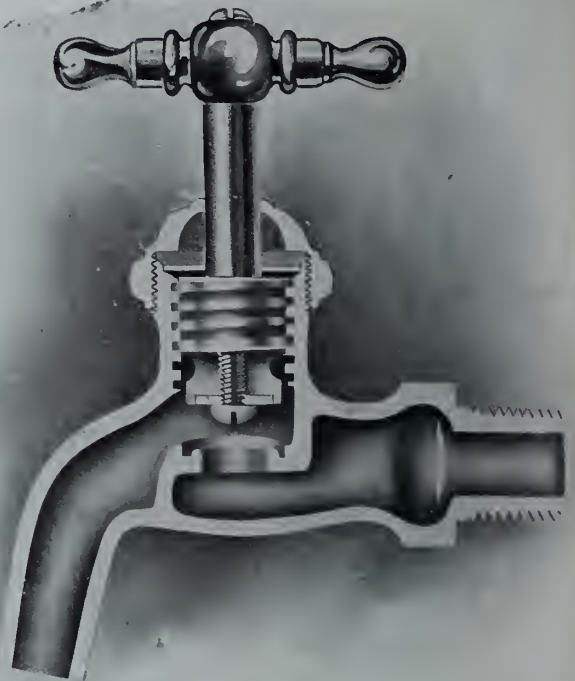
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Fig. I

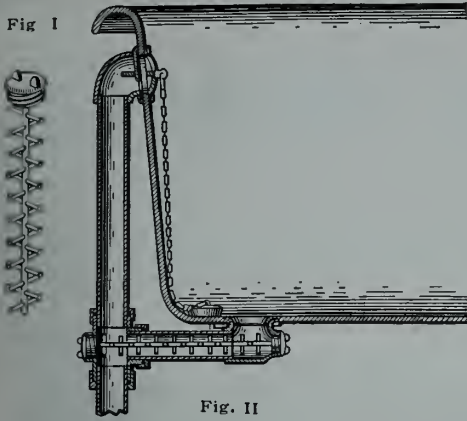


Fig. II

E.N.O. Patent Bath and Waste Overflow

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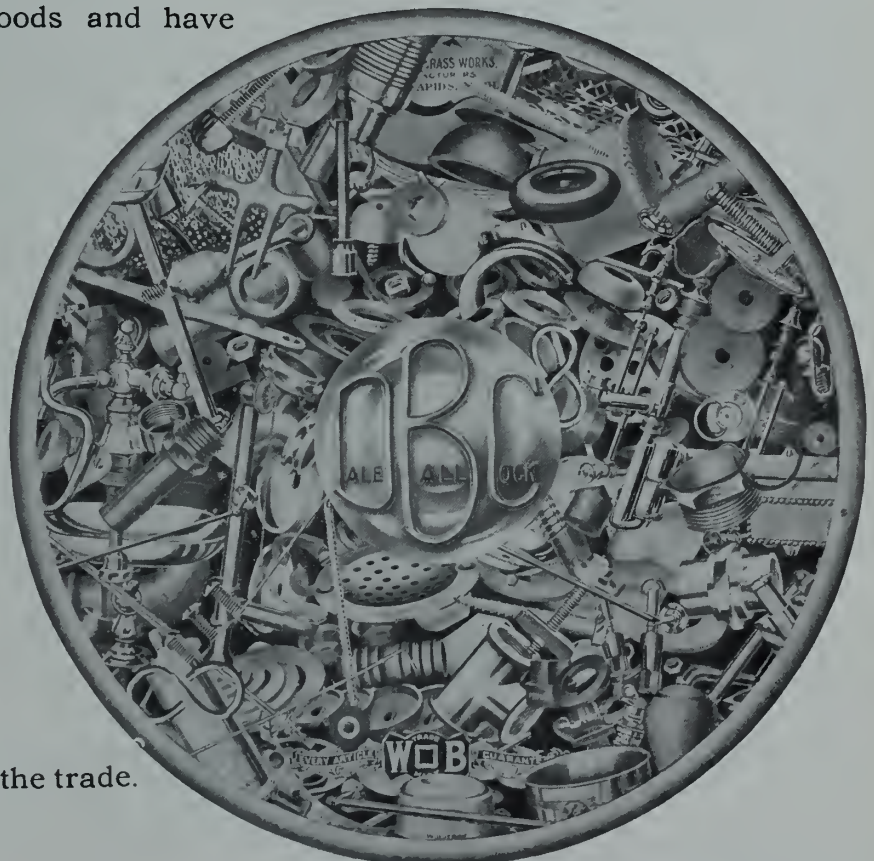
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ters, Sanitary Inspectors, Heating and
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TORONTO, MAY 1, 1911

The meeting held in Toronto on Good Friday, at which the Ontario Society of Sanitary and Heating Engineers was organized, was almost epoch making in its certain effect on the future of the trade. The change in

AN IMPORTANT STEP TAKEN.

the name was evidence of a growing realization on the part of the plumber of the importance of the work he does. A plumber was once a worker in lead. To-day, his scope is wider and more complex. He provides the sanitary conveniences and he heats and ventilates the home. He not only provides comfort but he safeguards health. It was felt by the men who organized the Ontario society that the word "plumber" had outlived its usefulness, since it no longer conveyed any adequate impression of the nature of the calling.

The most important step taken was the decision to limit the membership to those who are able to pass a more or less strict examination. If the Ontario society continues to work along the lines laid down, one can see that in the not far distant future, people will naturally prefer to give their patronage to members of this organization, which admits only fully competent men. It will give the members a standing not now held by anyone in the trade, with the exception, perhaps, of the larger firms. The issuing of certificates to all members in good standing will help to effect this much to be desired consummation.

Ontario has set an example worthy of emulation. Will the other provinces fall into line?

Tin has continued the "uneven tenor of its way" during the past month. On the London market the price has varied from £193 to £173 and back again to £191 in a very short space of time.

Is it possible that there can be somewhere in this broad Dominion, a place so blessedly situated in the matter of trade conditions, that it could be called a "plumbers' heaven"? William Whiteford, of Regina, claims his home city to be quite deserving of

CAN THIS BE POSSIBLE?

this title. In the course of a letter to the editor of Plumber and Steamfitter, he says: "I could tell you about our association, of which we are all proud and which we have reason to be, but doing so would look pretty much like telling of a 'plumbers' heaven.' Of course plumbers, like all sons of Adams, are looking forward to that place, but to divulge all the facts as they are up here, would be inviting all the plumbers in

Toronto and elsewhere up here to go into business. Even heaven, I suppose, can get overcrowded."

If trade conditions in Regina are so good as all that, Regina is indeed thrice blessed. In some places we have heard from the conditions are such that local members of the trade are living in a fair imitation of the Other Place. Instead of being abodes of bliss, these places have become realms of regret.

It goes to show, however, what good organization can do. We know of several places in the West and near-west, where the organization is so good that they have become quite as fortunate as Regina. Cities and towns, which are still groping in the darkness of antiquated conditions, should follow the example of these more progressive places.

The surest way to get through any legislation, that you particularly desire, is to oppose it a little at the start.

The plumber to-day cannot afford to confine his attention to the details of his own business. There is a good work to be done outside, if he cares to turn his hand to it. For one thing the trade should be represented on the provincial and local boards of health. That the necessity for at least one plumber on every board, devoted to health matters, has not

REPRESENTATION ON BOARDS

been recognized in the past, has been due partly to public shortsightedness and partly to the backwardness of members of the trade. They have made no effort to assert themselves or to take a prominent part in civic and public affairs.

An aggressive plumber can prove a valuable public servant, particularly in regard to the regulation of health matters. He is qualified to act in that capacity, as it is almost in line with his own business. There has been a tendency noted of late in many places to include a master plumber in the personnel of health boards and the results have been eminently satisfactory. A glance at the work which has been done in Port Arthur and Fort William will bring conviction on this score. The very satisfactory condition of affairs existing there has been brought about largely by the fact the plumbers have been represented on the local boards of health.

This is a matter which the associations should take up. Pressure should be brought to bear to have a plumber appointed on every board of health. Beneficial results, both from the standpoint of the public and the trade, will surely follow.

One of the most gratifying tendencies of the present day is the marked improvement being effected in sanitary regulations and appliances. Commenting on the situation in Western Canada, a contemporary says: "Scarcely a

IMPROVEMENT IN SANITATION

day passes that does not bring an announcement of improvements in water supply or sewerage system from some part of the prairie country. The larger cities have given the cue in this connection. They have realized that the welfare of the whole people, and, consequently, the success of the community as a business centre, depends upon the adoption of a safe policy in regard to sanitation. No place can make progress if it is unhealthy."

The same progress is being made with reference to building construction. Not many years ago, a steam heating or hot water plant was a rarity, a bath room a luxury. To-day, they have become features of a great majority of homes. The future will doubtless see even greater advancement along these lines.

No depression in the United States seems to have the power now to disturb the prosperity which prevails here. Canada's industrial expansion is so great that even a temporary setback is highly improbable.

A "reform" bill has been passed in Maine which bids fair to remedy conditions in that State which have been detrimental to both public and trade. Among the clauses of this admirable measure is one which provides that all boards of health shall have at least one practical plumber as a member. In many places in Canada, plumbers have gained a place on the board of health and have done good work. The lawmakers have not yet realized this however, and there is nothing on the statutes of this country making practical representation on the board a necessity. The Maine enactment grants the power to all health boards of appointing one or more plumbing inspectors.

It is not an easy matter, as a general rule to effect reforms in legislation. Particularly is this the case where plumbing regulations are concerned. The promoters of reform legislation have to advance in the face of all manner of obstructions and strenuous opposition, conjured up by ignorance. But it is well worth the struggle, and the success of the Maine promoters should bring encouragement to those in this country who are fighting for the passage of legislative measures and municipal by-laws.

Winter has been "lagging superfluous on the stage" in the opinion of every master plumber. Spring though the inspiration of many a poetical flight, is an eminently practical and business-bringing month and as such is always welcome early.

English plumbing journals, says the Metal Worker, indicate that the emigration of skilled journeymen to the United States is having an effect on the number of first-class workmen available for large British undertakings.

TECHNICAL INSTRUCTION

At a number of meetings in the trade on the other side, the need of giving better technical instruction to the young men and giving better training to them has been clearly presented; and this is in a country where there are now so many training schools and where the Plumbers' Guild for years has maintained a course of instruction which requires no

small amount of study to reach the proficiency which secures a certificate.

It is clearly recognized that while handcraft is important to the plumber in his everyday work, it is equally important that he should be a master of the theories and principles which underlie his work. He must also be conversant with mathematics and physics and the various rules to aid in solving the problems in his field. English workmen in America have commonly shown their learning in these fundamentals and a close familiarity with books pertaining to plumbing. It is the long acknowledged falling off of candidates for the regular apprenticeship in this country and a similar appreciation of the value of the technology of trade that account for the large number of trade schools and manual training schools which are being established in different parts of the country. It seems clear to many that there is need for more of the technical training schools, and that without them it will be almost impossible in the near future to recruit the ranks of skilled workmen to meet the requirements of the times.

Hope to meet you all at the "Twin Cities."

In view of William Whiteford's proud description of conditions in Regina, we beg to suggest the following slogan for that city: Regina, Busy, Beautiful and Beneficial.

A Regina master plumber speaks of his home city as a "plumbers' heaven." Might not one question the admissibility of associating the two words?

SIGN PROVES BAD ADVERTISEMENT.

The writer has had occasion to pass a certain hardware store several times during the past two weeks. The first time there was a sign in the window, "Special Sale To-day Only." The second time, although several days had elapsed, the sign was still there. It has remained in the window ever since and bids fair to become a permanent fixture.

As a means of drawing trade, that sign lost all value long ago. It has now become nothing but a public evidence of the indifference of the dealer and the carelessness of his methods. Furthermore, it bids fair to deprive the dealer of the opportunity of ever holding a bona fide sale. If he happened to announce one, people would not know whether the announcement referred to something real or an event which occurred at some remote stage of the store's history.

The public are quick to note such things. They judge a store pretty much by outside appearance and that sign is one of the poorest advertisements a store could have. Every dealer may well look his premises over and see if he has unwittingly been allowing anything of the kind to give his store a bad appearance.

With plenty of work ahead for all of them to do, some Vancouver master plumbers are said to be cutting prices. There is one born every minute so it is not strange that a few have gone into the plumbing business in Vancouver.

Rigid legislation against mail order houses is pending in Missouri. In the state where ocular demonstration is deemed necessary, the legislature is considering a measure to impose a state tax on these concerns. The tax would be placed on the amount of business done and would work on a sliding scale. It is quite frankly admitted that the idea is to assist the home trader.



OFFICIAL NEWS of THE N.A.M.P. & S.F. of CANADA



Plan Evolved to Secure a Good Membership

Ontario Society of Sanitary and Heating Engineers Will Recruit Members With an Eye to Qualifications and Eligibility—Other Topics Discussed at the Organization Meeting.

AT the initial meeting of the Ontario Society of Sanitary and Heating Engineers, one of the questions to which much time and attention was devoted was that of organization. It was felt, and rightly so, that the success of this new body would depend on securing a good membership, both with regard to quantity and quality. To serve the purposes for which it was organized the society must carry weight; and to carry weight it must have a membership at once representative and respect winning.

A plan was mapped out which should enable the officers to work up the membership on the right basis. One man was selected from each section of the province to act as organizer pro tem for that part. It will be the duty of each man selected to prepare a list of eligible and desirable members of the trade operating in his section. The lists thus prepared will be sent in to the secretary and efforts will then be made to get the men named thereon interested in association work. It is not expected that there will be much difficulty in enlisting the active support of practically all, as the society, on the basis on which has been established, will be a very desirable body to affiliate with.

The membership fee was adopted only after considerable discussion. It was first suggested that a flat rate of five dollars per member be fixed but it was pointed out that this would prove a great hardship to the large local associations, such as Toronto. The Toronto association aims to have 200 members before long. As it will, of course, be affiliated with the Ontario society, the amount assessed for provincial dues would be \$1,000 per annum and the Queen City men did not see that they could afford that amount. It

was finally decided that the rate should be \$5 per member for every member up to ten and over that \$1 per head. On that reckoning, with 200 members, Toronto would pay \$240.

About the Examination.

The examination system will not be brought into effect until the second year. If the tests submitted are ratified by the society at the next general convention, it will then be necessary for all to pass them before being admitted, or continued, as members. Some discussion arose as to the methods of conducting the examination and it was pointed out that the best way would be to have a traveling representative to submit the papers to each candidate for membership. The candidate would fill the papers out in his presence and they would then be turned in to the central examining board to be passed upon. Here is where a paid secretary and organizer would come in handy.

A Salaried Official.

Considerable discussion was heard on the question of the appointment of a salaried secretary and organizer. Most of those present were strongly in favor of such an appointment. In fact, it was felt that lasting success could be obtained only in that way.

As this question will come up at the convention of the National Association, no action was taken. If the National makes an appointment of that kind, the same man could act for the Ontario Society.

The decision to have the society incorporated was reached largely to provide against encroachment. For instance, it was pointed out that, unless it was incorporated, anyone in the province could lay claim to the title "sanitary and heating engineer" or even duplicate the society membership certificate.

PROGRAMME NOT PREPARED.

Information from the Twin Cities is to the effect that the programme for the convention of the National Association of Master Plumbers has not yet been arranged. The convention will last one week and the time will be divided up between business sessions and pleasure jaunts. As there are a number of important matters to be discussed, it is intended that ample time shall be given to the transaction of business. However, the social end will not be neglected and the plumbers of Port Arthur and Fort William are seeing to that part of it. The week will be full of pleasurable incidents and certainly no master plumber can afford to miss it.

Arrangements have been somewhat delayed by the absence in New York of J. Marshall, the convenor of the entertainment and sports committee. A meeting is soon to be held of all the committees, however, and all matters will then be straightened out.

J. W. Barnes, convenor of the advertising and correspondence committee, writes to Plumber and Steamfitter:—"We have no intention of having a manufacturers' exhibit but if the manufacturers on their own behalf, wish to put in an exhibit in the Twin Cities, we would have no objection whatever."

Convention Correspondence.

Letterheads and envelopes inscribed with convention literature are being used. No effort is being spared to suitably advertise the big event.

Supply Company Moves.

The National Plumbing Supply Co., Toronto, have moved to handsome and commodious quarters in the Adelaide Building, 115-119 Adelaide street west, one block east of their previous premises. When everything is completed they will have a splendid showroom and capacious offices.

A company of eastern capitalists will build a plant for the manufacture of sewer pipes at Estevan. The cost will be \$150,000.

The Great Advance the Plumbing Trade Has Made

Houses Were Once a Happy Hunting Ground for Millions of Germs—The Sanitary Engineer has Changed all This—The Great Work That Lies Before

J. J. Wade read the following paper at a recent meeting of the American Society of Inspectors of Plumbing and Sanitary Engineers at Milwaukee:

I have been asked to travel along the road of reminiscences. This request has been made to me, doubtless, because I possess the number of years fitting me for such a journey. It is a saying, "Old times are hard to bring into the mouth, but are ever inside the head." For this reason I find it difficult to express in coherent form the many things that come into my mind in connection with the progress of the plumber from

The Plumber's Work of Days Gone by.

The plumber's work of days gone by. Few trades can show a greater change in the character of their work than the plumbing trade. It is difficult to compare the plumber of the present time with that of the past. Previous to 1870 he was essentially a lead worker. In every previous century we find him so. It was an honored craft in the earliest times. The plumber was a master craftsman who was not afraid to cut his name on his job. In excavating ancient Rome, at the unearthing of the house of Sallust, dating back to 1 A.D., among the lead pipe were cut the names of the imperial owner and the man who made the pipes. The plumber was still a lead worker in 1863 in this country. Most of the master craftsmen at that time were Scotch. They were experts in lead working, the making of pipe, covering of roofs, the laying of gutters, forming of hip-ridges and valleys, and the fixing of water-trunks. The plumber made all the systems and reservoirs. He was a worker in brass, making his own brass goods. He assembled his closet apparatus. He made pumps and acted as a hydraulic engineer to the building trade.

Wages in Earlier Days.

The wages in those days would not impress the members of this convention favorably. A good man could earn \$2 a day. We would consider that a low price. Two dollars, however, was a lot of money at that time and the plumber thrived on it. He went to work in clean overalls; he wore a plug hat; in modern parlance, he was considered "some pumpkins." A better comparison of his importance financially can be made when we understand that most mechanics were satisfied to earn \$7 a week.

The plumber was essentially a bench worker. He patiently and skillfully pounded out his lead traps and waste

pipes. He studied each domestic condition as a separate problem and was sanitary engineer of those days, in the same way that the plumber should be the sanitary engineer of these days.

Changes in the Trade.

The trade slowly changed. We experimented with zinc pipe from Scotland and discarded them in favor of lead. We learned how to handle gingerly the English glass pipe, which came in 12-ft. length, and perfected ourselves in making the joints in the glass-pipe lines, clamping them with brass and rubber.

During the years 1870 to 1875 another change took place. It was noticed that the hot-water service pipes sagged, while the cold-water pipes remained true. The sagging was unsightly, especially when, as was often the custom, the two pipes were run along the ceiling. It became the custom, then, to use iron pipe for the hot-water service and lead for the cold. Iron-pipe manufacturers, having driven in the thin end of the wedge, soon gained firm foothold and the lead-pipe workers ceased to be busy. We know now how little the plumber of the old days would be able to use his former skill in the handling of lead and brass.

The old-time plumber was a sanitary engineer at his best when dealing with the early sewer systems. Every house had its individual sewerage system. The old English-style houses were the happy hunting grounds of millions of germs. The base of the waste pipe was a convenient opening for the triumphal ascent of rats to the kitchen swill pail. As the kitchen sink was closed in and the swill pail was contained by the enclosure, each sink compartment became a banquet hall, and the rats ate into the waste pipe as a means of sharpening their teeth for further gastronomical activities. There was no open plumbing, and typhoid fever was expected to be a part of human experience, even as fond mothers still expect their children are obliged to have measles and mumps in order to fit themselves for the battles of life. The cellars beneath the houses at every rain became quagmires and ponds, from which foul odors rose and made breathing uncomfortable and health almost impossible. It is a good thing that the Creator provided the wonderful human system with a high coefficient of adaptability to conditions.

We taught people the importance of concrete cellars, or, rather, of damp-proof foundations and concrete basements. The piping to the cesspool was subject to no law, and they were made of wood or they were made of clay, and

a popular joint for the pipe was made of linseed oil, white sand and white lead. I considered that I had taken quite an important step in using clay tile for soil pipes. Some of my contemporaries considered me a radical. Did you ever know an Irishman who was not?

There were no vents in the old traps, which for many years after the adoption of lead pipe were still made by hand. The traps were made in as many varieties as they are to-day, every trap maker following the bent of his own sanitary fancy.

Plumbing Costly in Early Days.

Another evolution took place in water-closet construction. There was the pan closet, and then a succession of other types, but any one of them would be condemned to-day as being insanitary. We had our difficulties in sanitary disposal of the sewage and we overcame them by special consideration of the conditions of the soil and ground. Plumbing was an expensive thing in those days. People have an idea that the prices of plumbing to-day are high. I can assure you that a comparison of old-time and present-time prices would show a high percentage of reduction in favor of the modern article. In the '70's a man who had a complete set of plumbing in his house was considered wealthy. And he had to be, for the old-time Scotch plumbers were better collectors than many modern plumbers.

Factors Which Have Brought Changes.

About 1880 two factors entered into the building field which essentially altered plumbing practice. The first was the building of large public structures in which iron pipes were used throughout their entire plumbing and heating systems. The earliest skyscrapers of that date gave the final death blow to the lead-pipe-making industry. The second factor was the advent of the skin contractor, sometimes also known as the "jerry builder." He built to sell, and did not care whether he stayed in one place long. His work was typified by the following story: Two "jerry builders" were constructing a row of houses, one on each side of the street. A heavy wind storm occurred one night and in the morning one row of houses had been blown down, but the other row managed to survive. The contractor who had lost his structure said to the other: "Jim, I can't understand it. All our houses are built to the same specifications and of exactly the same material, and fitted together exactly the same way. Why should your row stand

up and mine fall down?" "I don't know," said the other; "I guess it must have been because I was a day's work ahead of you. You see, all my houses had their rooms papered."

Origin of the Cut-price Plumber.

The skin contractor was the cause of the cut-price plumber, and from those days we have always had the sub-contracting evil. The plumber ceased for the time being to occupy in the public mind the position of a master craftsman. He learned to follow the contractor around like a hired man. He became apparently a mere installer of apparatus, who was paid far too high wages for the work he did.

National Association and Improved Plumbing.

In times of darkness look for daylight. Daylight came in 1883, when the first organization of master plumbers took place in New York City. This was quickly followed by a similar organization in Chicago, and the strength of the National Association of Master Plumbers is due to the activities of those two pioneer associations. The plumbers of the country were determined to win back the position they had lost through change in working conditions. Legislation on plumbing was secured and step by step every improve-

ment in sanitary conditions up to the present time can be traced directly to the influence of plumbing organizations. The individual is no longer permitted to experiment with the public health. We have sanitary laws which are constantly being improved, revised and kept up to our standard of sanitary knowledge, and plumbers have made them and enforced them.

One of the most important factors in the maintenance of public health at the present time is the plumbing inspector. His interests are indetical with those of the plumber. He, too, had a modest beginning. At his first introduction he was considered merely as an appendix to a political campaign. Experience has proved his worth. The cities are recognizing the importance of his work, and the plumbers have come to the knowledge of the protection he affords to the dignity of their profession. He is the watchdog against cheap production and insanitary installations.

The sanitary engineer has come to stay. Few people yet realize how important will be his position during the next decade. The gospel of sanitation is being preached from coast to coast through the daily press, the trade journals, and the popular magazines. People are being taught that health is as contagious as disease.—Metal Worker.

was to sell and install lighting fixtures; and this they decided to do, in spite of the opposition which they knew they must encounter. As an added inducement, they saw that the advent of Niagara power would inevitably increase the demand for electric goods.

Westwood Bros. have now carried the new department for three months and the results have far exceeded their most sanguine expectations. They have already worked up a good trade and have turned over a neat profit. In addition to this they have made many new customers who are giving them their plumbing and heating work as well.

"We find that it pays to carry an experienced electrician," said E. B. Westwood, to a representative of Plumber and Steamfitter. "He looks after this end of the business entirely and we have had plenty of work so far to keep him busy.

"One objection that we have heard urged to going into the fixture business is that the store needs electric power, in order to show the stock to advantage. We haven't the power in yet and it does not seem to interfere with our sales to any extent. Any hardwareman who has kept out of the business on account of his lack of electric power need hesitate no longer. Possibly, more money could be made with electric light in the store. However, we have been perfectly satisfied so far."

Lighting Goods Proved a Paying Proposition

Westwood Bros., Toronto, Worked up a Good Business in Three Months' Time—How and Why an Electrician Secured a Plumber as a Partner.

"Does it pay a plumber to handle electric fixtures?"

This question was put to a man engaged both in plumbing and electrical work. As he worked both departments pretty extensively, he was fairly entitled to speak from experience.

"I should judge so," was the reply, "but, you see, I am not a plumber myself. I was an electrician originally and I found that the two went together so naturally that I got a plumber for a partner and started into that line too. We do a good plumbing business and our electrical trade has almost doubled itself."

In other words, he had found that he could get more business in electric work and sell more fixtures, if he had a plumbing department. Events had proven that being in the plumbing business had opened the way for a better fixture trade. If such is the case, it should be quite possible for any plumber to gain a fair share of the trade.

No branch of industry is growing more rapidly than gas and electric lighting. People are coming more and more to use either the one or the other, or both. The demand for fixtures is, perhaps, double now what it was a few years ago and it is not too rash an assumption to say that it will double itself again in the course of the next few years.

That it pays to handle fixtures is the testimony of Westwood Bros., Queen Street West, Toronto, who started to sell lighting goods for the first time three months ago. They took the plunge with some degree of hesitation, as the big departmental stores have largely controlled the lighting fixture trade in Toronto for the past few years. It looked like a stiff proposition but they were impelled to take up the goods by a desire to complete their outfitting facilities. They do heating work, plumbing, gas fitting and carry a full stock of hardware. All that was required, then,

Vancouver, B.C.—The suggestion has been made among the plumbers that a demand be made for an increase of daily wages from \$5 to \$6. While this suggestion is being discussed among some of the members individually it has not yet come before the local union for definite consideration.

Another feature is the proposed amendment of the civic by-law regarding lead pipe working. It is stated that a change is to be made substituting iron pipe for lead pipe in certain parts of the house plumbing, and if this is done it will mean just that much less work for plumbers, as the iron pipe may be put in by anyone.

Some of the plumbing establishments are making the mistake of cutting prices to obtain work. There is a large amount of work to be done, as building is more extensive in Vancouver and environs than ever this year, and the reduction of prices only means that work cannot be done at a reasonable margin of profit.

News From Coast.



The Question Box



Subscribers are Urged to Send Questions to be Answered, or to Comment on Letters Published. Descriptions of Jobs Done or Shop Kinks are Also Invited.

UNSATISFACTORY PLUMBING

Editor Plumber and Steamfitter:—I am sending you a sketch of a run of pipes on a plumbing job which does not seem to give satisfactory results. In the first place the pipes "A" and "B," in figure 1, were put on in that manner as it was thought that it would give a circulation and enable the owner to more quickly draw hot water from the fixture lines shown by figures 3, 4 and 5. It does not seem to be a success. Again, there is, at times, an unpleasant pounding noise in the system. Will you be kind enough to publish and suggest any changes that you may think advisable?

SYSTEM.

We have examined the sketch sent in and have drawn another which we now publish and believe that it would work to much more advantage. In the Figure 2, as sent by the correspondent we believe that the pipes "A" and "B"

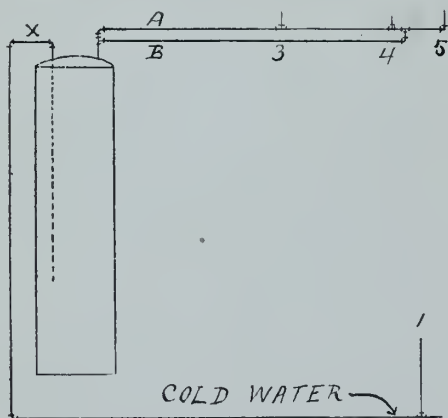


Figure 1.—Sketch Sent in by Subscriber of Job that is not Satisfactory.

would not give a circulation at all. They would merely lay full of water and, when a faucet was opened from either "4", "5" or "3", the long line of cold water would have to be drawn out before the hot water could arrive. At "X", we notice another feature that we do not like. As the cold water line is installed, there is a chance for an air pocket at the point, an undesirable feature which can be overcome if the line is run as shown in figure 2 for then there would be a chance to draw off the

air at any of points "6", "7", or "8", which might lead to the different fixtures on the job.

If the hot water line is run something after the manner as shown in figure 2, the lines to the fixtures may be taken

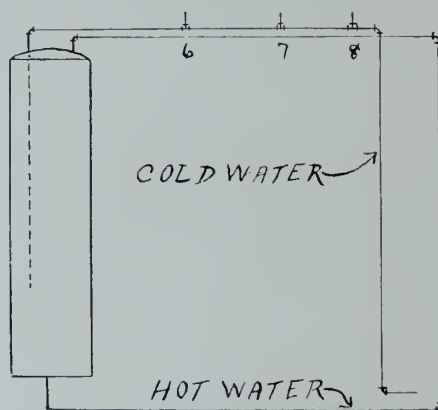


Figure 2.—Proposed Changes in the Job Shown in Figure 1.

off at the points most convenient and there will be a circulation. The hot water circulating line need not go into the bottom of the range boiler, as we have shown, but, if more convenient, could be cut into the cold water pipe between the water back and the range boiler. Care should be taken to see that none of the pipes are trapped and all of the pipes should be reamed.—D.C.H.

HOW THE RANGE BOILER ACTS.

Editor Plumber and Steamfitter,—Will you be kind enough to have your man explain something about the manner in which the range boiler acts? Winnipeg, April 17 C. R.

The ordinary range boiler has in it four openings. Two are at the top, one at the side and one at the bottom. The manner of connection to the water front and to the cold water are too well known to dwell upon here. Now the cold water goes into the water front from the range boiler passes through said front acquiring heat and from thence it passes to the range boiler, rising to the top of same. The hottest water will be found at the top of the boiler. If a drop pipe be not put in the

boiler to throw the entering cold water down to the bottom, the cold water is liable to cross over and mingle with the hot water when a faucet is opened, sometimes to the extent of cutting off the hot water entirely thus drawing cold water from the hot water faucet, the range boiler, meanwhile remaining full of hot water. The coldest water at the bottom and the hottest at the top of the range boiler as generally connected. So the supply to the different fixtures is taken from the top of the boiler. This circulation is, however, confined to the water front and the range boiler and will not extend to the lines of piping unless other means be taken to secure a circulation on, or rather, of the pipe lines. If long single lines of pipe be run, independently to each fixture (we are now considering the hot water pipes) there will be a long line of water laying in each pipe. This water does not circulate, is therefore cold (or nearly so) and must be drawn off before the real hot water can arrive. So the plumber has tried to run the hot water line in such a manner that the water will be returned to the range boiler and a constant movement, or circulation kept up. This gives a moving stream of hot water from which the short lines to the various fixtures may be taken off and then when a faucet is opened, it will be but a moment before the hot water comes, as the amount in the short line of pipe which leads to the main circulating line, is but trifling, amounting perhaps to less than a pint. The circulating line in plumbing work not only gives hot water much more quickly, but it cuts down the amount of water consumed and in various places the latter consideration is of no small amount, more especially if the work happens to be in a large hotel or hospital.—D.C.H.

WHICH STYLE OF FAUCETS?

Editor Plumber and Steamfitter,—In installing the various faucets of a plumbing job, which style is considered better, the Fuller or the Compression? Toronto, April 18. T. H. M.

We believe that it is a matter of

choice, circumstances and the proper installation.

The fuller gets quicker action, but is open to the objection that, in the hands of a tricky or unpractical man, of improper connection and in such an event there will surely be a case of water hammering. Compression work has been

found to give satisfactory results. We should say that it was a case of knowing your business. The best fixtures or fittings can be ruined or made to give most unsatisfactory results in the hands of some one who does not understand their proper mode of installation.—D.C.H.

soon as the busy season is finished, and endeavoring to employ a new staff when business again picks up.

McLAREN-WILSON

A pretty wedding was solemnized on Tuesday, April 11, at the home of Mr. and Mrs. R. Wilson, Sunnyside Farm, Thedford, when their daughter, Marion M. Rowand, was united in marriage to T. Herbert McLaren, of the Canadian Brass Co., Galt.

The bride entered the room on the arm of her father to the strains of Lohengrin's wedding march, played by Mrs. F. W. McLaren, of London. The

How Some Plumbers Develop New Fields

Opportunities for Plumbing Business Not Confined to Cities and Large Towns—Villages and Farmers are Demanding Improved Sanitation—Good Field for Plumbers Where Competition is Not so Keen as in Cities.

Plumbers and steamfitters are, as a trade, practically confined to the cities and large towns, where the existence of waterworks and sewerage systems, ensures them a field for their labors. The result of this living of an entire trade, in a few large centres of population, has been to create ruinous competition in their own localities, to the almost total neglect of outlying villages where many undoubted opportunities exist.

The great prosperity which Canadian farmers have experienced during the past fifteen years has very materially changed conditions on the farm. Houses are now built with some regard for comfort and convenience—and even for appearance. Stables are constructed with elaborate precautions, to safeguard the health of the cattle they protect, and not a few of them are equipped with extensive water systems. Moreover, the schools, churches and other public buildings which are now being erected in country districts, are being equipped with the proper sanitary conveniences.

Water Systems Being Readily Adopted.

A glance through the current farm papers, will reveal the fact that there are a great many manufacturers looking to the farmer, as a purchaser of a host of different plans for creating a private watering system. There are wind mills and gas engines, and various kinds of pneumatic tanks, all of which have, as their object, the placing of city conveniences within reach of the farmer. It must be taken for granted that the farmer is responding to the attention which is being showered upon him from this source, otherwise the advertisement would be discontinued. Therefore it looks as if there is work for the plumber in at least some of the country districts.

There are a good many growing towns where water works have been installed, and where there is consequently, a demand for plumbers. This demand may be somewhat limited, in the early stages of development, and, for that reason, plumbers are often sought in the neighboring large towns. This very circumstance opens up the possibilities which

are open to the plumber who cultivates the towns and villages in his vicinity.

Preston Plumbers Reach Out.

The town of Preston furnishes an example along this line. This place adopted water works about four years ago, and, since that time, a system of sewerage has also been commenced. The town has been growing very rapidly, nearly one hundred houses being constructed every year, and a good proportion of these houses are being equipped with bath rooms. There is, therefore, considerable work for the plumbing trade.

As soon as the waterworks system had been installed, both the Preston hardware firms, Bernhardt & Gies and W. F. Mickees established plumbing departments, and engaged competent workmen for their staff. During the busy part of the season, they have, ever since, been plentifully supplied with plumbing and heating work.

There are, however, parts of the year, when the local work would not suffice to keep the Preston plumbers fully engaged, and, for that reason, both firms have adopted the policy of tendering on work in the nearby villages. Both have been very successful, and some nice contracts have been closed by them for the plumbing and heating in store blocks, schools, public libraries, as well as in private residences.

Advantage of Outside Contracts.

Of course, it costs a little more to do these jobs than if they were right in the town, on account of traveling expenses and board. On the other hand, it is generally possible to get a considerable better price in these outlying places, for the simple reason that there are not so many plumbers quoting on the work, and cut-throat methods are not adopted.

The chief advantage of these contracts, however, consists in the fact that they permit the master plumber to hold his staff together, during seasons which would otherwise be slack. Keeping up the efficiency of the organization, is an important matter, as every plumber must recognize who has gone through the experience of letting his men go, as



T. HERBERT McLAREN.

cereemony was performed by Rev. A. E. Lloyd, of Thedford, at the close of which Miss Wilma Bickell, of Ayr, sang "Because."

The bride looked very charming and was attired in an ivory silk gown trimmed with pearl garniture and satin ribbons. Her traveling suit was of blue broadcloth.

The groom is well known to members of the trade whom he has called upon during the past two years and all will join in wishing him every happiness.

Fought a Policeman.

William Green, a London, Ont., plumber, is a man of great prowess if all reports are true. He met a policeman the other night and boasted that the man with the brass buttons could not arrest him. "No policeman can arrest me," said Green. "You are all a bunch of farmers working for \$1.25 a day." In the mix-up that ensued, the officer's tunic was destroyed and Green will have to foot the bill to the tune of \$16.50.



POINTS ON HEATING

by
CHAS. H. DENISON



Chapter 7.

Passing down one of the streets the other day I observed an iron smoke pipe at least twenty feet long that had been "drawn down." I was somewhat curious to know just how many inches the mechanic (The powers save the mark for my calling him such) had cut down the draft and so I stepped in the shop and borrowed a rule, then went out on the street and measured the pipe. There was a hole twelve inches in diameter at one end, while at the other end the hole was six inches in diameter only. I asked the party inside where they were going to use the stack and he informed me that it was for a heating job in a factory in another part of the city. "But do you expect that the draft will be all right," I inquired? "Surest thing ever," he replied. "There's a big pull from the chimney, it'll take a cat up backwards." Now I would be willing to put up a pretty good, stiff bet that when they come to fire up that particular job the "very deuce will be to pay." Look at the proposition. The man who made the pipe has cut down the diameter of the pipe exactly six inches. Now this means much more than it seems to signify on the face of it for if you will take up some good catalogue having in it the table for the areas of circles and look the point up, you will find just what this blunderhead has done. In a six inch round smoke pipe there are 28.274 square inches, while in a twelve inch round smoke pipe there are 113.10 square inches. The man is trying to make over one hundred square inches draw into some twenty-eight. He deliberately cut out 84.82 square inches of the space in the pipe as being of no use whatever. He threw away more space than there was in the six inch chimney and how in the name of all that is good and bad he expected the job to succeed is more than I can figure out. Perhaps it was ignorance. I saw the very same thing happen, once, up in North Dakota where the architect was not "hep" to his job. He lined the inside of the chimney that was to carry the heating plant for a hospital, with some kind of

tile that he was "stuck" on, or else got a percentage on for working into the job. The smoke pipe was cut down fully one-third over what the measurements called for on the boiler and when the job came to be fired up, while it did not smoke any to speak of, it was totally impossible to get two pounds of steam upon the boiler, which was one of the very best upon the market. They had "yours truly" and several other fitters "work out" the apparatus, but all to no effect. We all told the contractor and architect the same story and that was that he would have to pull out the tile from the chimney in order to give the proper amount of air space. So a man was started at the top of the chimney, cutting the tile out downwards. It took him three days to do the job. Meanwhile a new smoke pipe had been built, of sufficient capacity to carry the boiler. After the repairs had been made, they had to put a nigger on the safety valve, so to speak, and niggers are much scarcer up there in Dakota than along the Mississippi river whence the saying originated.

In many different places it is the habit to build the chimneys so that the inside of the flue is 4" x 12" or a total of 48 square inches. This is not the proper shape for a flue, anyway, as the tendency of the column of hot air or smoke is in a spiral form. A chimney 7" x 7" would be much better practice. Many times on these chimneys 4" x 12", I have observed boilers having a nine inch smoke pipe on them, connected, and if the gas happened to flash out when the fire pot door was opened, they would wonder why it so happened. The reason was that the 4" x 12" chimney had 48 square inches of space while the nine inch smoke pipe had nearly 64 square inches, the fitter thus sacrificing over fifteen inches of draft. One would imagine that with all that has been said upon the subject, the contractors and architects would know better by this time, but matters seem to proceed along in about the same manner year after year. When one has to hut go to some heating hook, an arithmetic, or some

boiler catalogue to find these things out, you would almost believe that the trouble would be done away with entirely. Now just because some party may be lazy and avoid going to that trouble, I am going to give right here a very few of the more common areas of circles. Cut them out and carry them along with you for the time may come when this information may save a lot of expense and needless trouble.

Diameter of circle.	Area in sq. ins.
6"	28.274"
7"	38.485"
8"	50.266"
9"	63.617"
10"	78.54"
11"	95.03"
12"	113.10"
14"	153.94"
16"	201.06"

Nothing like a complete table has been given, but I have put down those that would refer to the sizes most commonly used in the average shop, and I trust that it may be the means of calling the attention of some fitters to this subject which is gone into many times by the grossest of guess work or an ignorance which certainly needs enlightening. What is "draft" anyway? Ask some of your friends and you will be surprised at the variety of answers that you get and also at the very few people who are able to give a definition that will convey the right idea. One of the authorities on the subject defines "draft" as "the upward motion of a column of air within a flue, or gases of combustion within a chimney."

As to the causes of the draft it is explained that natural draft is produced by the difference between the weight of the column of gas inside the chimney or flue and the weight of the same bulk of cold air. The pressure in the chimney is a little less than the pressure of the outside air. Therefore the air will flow from the place of higher pressure to the place of lower pressure, or into the chimney through the furnace. That is the way the matter is explained by some of the main "gazahoes" in the ring to-day.

COLLAPSIBLE BORING TOOL.

By Jno. A. Bradley.

A collapsible boring tool used for roughing and described in the following was designed for use in the manufacture of gasoline engines, but its adaptability to other lines may make this description of interest.

Fig. 1 is side view, Fig. 2 an end view, while there is a sectional view taken through X.X. It consists of an inner arbor and cam shaft A, and outer arbor and tool holder B, cutters C of which there are twenty-four, and retaining screws D, a hand wheel E fastened to adjusting screw F, both of which are supported at one end by the bracket G and the cam shaft shifting lever H.

As previously mentioned this tool is used for roughing only. One end of the inner arbor and cam shaft A is inserted in the driving head, while the opposite end enters a pilot. When in operation the inner and outer arbors A and B rotate together, because of the adjusting screw F, one end of which is supported in the bracket G, fastened on the outer arbor B, while the other end

selves with much diligence and study to the question of equipment.

Results of experiments by them go to show that the wheels should be mounted on ample size spindles and that washers whose diameter is at least half that of the wheel be used as supports.

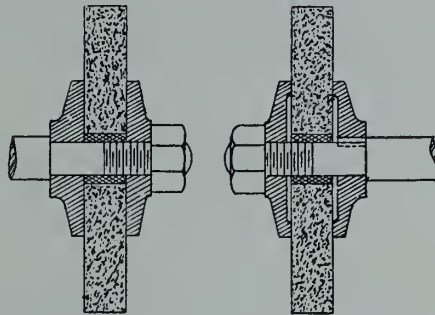


Fig. 1.—Wrong.

Fig. 2.—Right.

The inner washer should be pressed or keyed on to prevent its revolving, and both should be relieved as shown in Fig. 2, so as to ensure a true bearing along the outer edge only. Compression rings of pulp or rubber should be used between the washers and the wheel.

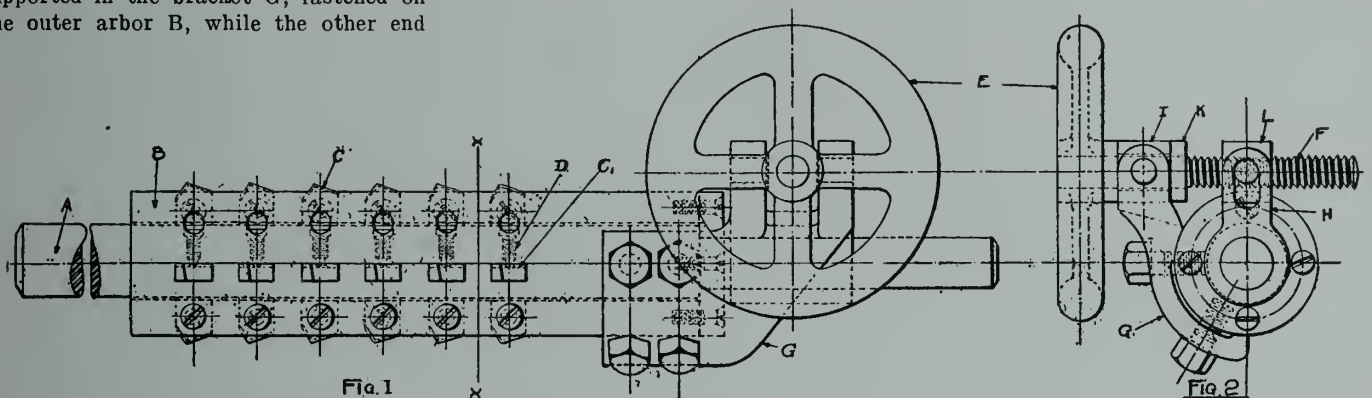


Fig. 1

Fig. 2

engages the cam shaft shifting lever nut L. The shifting lever H is fastened on arbor A.

The cutters C which are made a sliding fit in the outer arbor B are recessed as shown at C, to permit the end of the retaining screws D to enter, thus allowing the cutters to move in and out, a distance regulated by the length of the recess.

A very fine adjustment of the cutters is obtained by rotating the hand wheel E, the adjusting screw F having a fine pitch thread. The trunnion I supported in bracket G permits the adjusting mechanism angular movement.

GRINDING WHEEL EQUIPMENT.

By Pedestal.

With a view to lessening the liability to accidents from breaking or bursting of grinding wheels, the Norton Co., Worcester, Mass., have applied them-

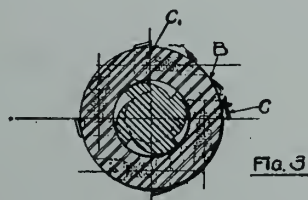


Fig. 3

Collapsible Boring Tool.

The grinding machine of itself should be substantial and rigid, have well fitted bearings and be securely fixed to proper foundations. Care should be taken to have the wheels true and in balance, and that the spindle hole admits of the wheel being slid on to the spindle without any appearance of play. The washers should be tightened just sufficiently to grip the wheel firmly without undue pressure.

To prevent work getting caught between the wheel and the rest, the latter should be adjusted as close up to the wheel as possible.

The speed of the wheels may be from 4,000 to 6,000 ft. per minute as required.

All machines should be fitted with a sign or indicator denoting their wheel diameter and spindle revolutions. Worn down wheels may in this way be utilized on machines speeded to suit their reduced diameter.

Single pulleys are to be preferred on the machines, obviating as they do the starting of new wheels at excessive speeds.

Protective hoods with trunks to fan suction should be fitted to conserve operators' health, and the care of the equipment should be delegated to a responsible person. Fig. 1 represents an improper method of wheel attachment, while Fig. 2 shows that recommended.

Public Buildings.

Plans are being prepared for a skating rink at Sudbury, Ont.

Ward One Liberal Association, Toronto, will erect a club house.

Plans are being prepared for a new Anglican church in Montreal west.

A building to be used as civic stables will be erected at Calgary at a cost of \$20,000.

A campaign has been started in Brantford to raise \$100,000 for a new Y.M.C.A. building.

A Carnegie library building is to be constructed at Regina. The cost is estimated at \$45,000.

A joint stock company will be formed in Calgary to build a Trades and Labor Temple at a cost of about \$100,000.

Work will be started in a few weeks on a new theatre at Fort William. It is estimated that it will cost \$85,000.

At a meeting of the congregation of St. Andrew's church, Stratford, a committee was appointed to go into the question of erecting a new edifice.

The Alberta Provincial Government has decided upon the erection of a large new land titles office at Edmonton to cost about \$200,000. An estimate of 230,000 has been put through for the purchase of a site.

Keeping Tinshop Costs

System of a Large Sheet Metal Firm—Necessity of Knowing What Work Costs—Time Sheets for Productive and Non-Productive Labor.

It is a much-discussed question whether a tinshop pays as an adjunct to a hardware store. There are so many details to be considered in figuring this out that many hardwaremen who conduct a tinsmithing department, frankly admit that they do not know whether it is paying them or not. Practically all will say, however, that the tinshop helps to bring them business that they would not otherwise secure, and so, whether or not it actually pays, of itself, it is, indirectly at least, a profitable department.

This conclusion is not very satisfactory to a business man. In order to conduct his establishment to the best advantage, he considers it necessary to know just what each department of his business is doing for him, at all times. The solution of tinshop costs is an important matter with him.

Methods of a Manufacturing Firm.

The Metal Shingle & Siding Co., of Preston, run a "Cornice Department" in connection with their business. In this department all the special sheet metal work is performed and, in addition to galvanized or copper cornices, the lines regularly made include fireproof windows, skylights, finials and all kinds of fancy sheet metal work.

Considerable difficulty was experienced in working out a suitable cost accounting system for this department. Many contracts taken by the firm included the erection of cornices, skylights or fireproof windows, and, in arriving at the final cost, such items had to be considered as the value of goods damaged in transit or in erection, and repairs made necessary by misfits. Such contracts required a special system to include all these contingencies, but as most of the jobs going through the cornice department included only the manufacture of goods, and not the erection, the system which was almost entirely used, was that described in this article. While conditions in the sheet metal department of a manufacturing firm are necessarily somewhat different from those prevailing in the tinshop connected with a hardware store, there are, nevertheless, some features of this system which could be profitably adopted in a good many tinshops.

System Described in Detail.

When an order for special sheet metal work reaches the office it is numbered and entered in the usual way, and sent out to the office of the superintendent. From this order, which the superintendent files, he makes out a shop order (Fig. 1). He enters the date, the order number, the department for whom the shop order is intended, the goods required, instructions as to delivery and

the customer's name. This shop order, together with the necessary details, then goes to the foreman of Department D (Cornice Shop), who puts the work in hand.

Gathering Material Required.

The Cornice Foreman secures all his supplies from the stock-keeper. In order to save time and lessen the cler-

D. issues a requisition card (Fig. 2) to the stock-keeper, and he delivers the goods.

If it happens that the goods are not in stock, the stock-keeper sends on the requisition to the superintendent who approves it and passes it to the Purchasing Department, who see that the goods are ordered.

Date <i>Feb. 13 - 11</i>		Shop Order		Order No. <i>E 1625-</i>
Quantity	Raw Stock <i>(Cornice foreman enters what was used here)</i>			
	Cut to Size			
Department <i>D</i>	Goods Required <i>Cornice 41 ft. long etc.</i>			
Date Completed			Deliver to <i>Shippers</i>	
Cost Material.....	<i>4</i>	<i>25</i>	For <i>Bogart</i> <i>Cobalt</i>	
Cost Labor..... <i>15 hrs.</i>	<i>3</i>	<i>00</i>		
Expenses.....	<i>3</i>	<i>00</i>		
Total.....	<i>10</i>	<i>25</i>		
<i>Crating</i>		<i>75</i>		
<i>Freight</i>		<i>60</i>		
		<i>11.60</i>		

Fig. 1.

ical work, he furnishes the department in quantities that are likely to last for some time. For instance, 75 sheets of crimped galvanized iron and 500 lbs. of solder would be handed out at one time. When any other stock is required, such as rivets, nails or hardware of one kind or another, the foreman of Department

In this way the stock-keeper has a record of everything that goes to Department D, and, as the Shop Orders all go through his hands, when the work is completed, he credits the Cornice Department with all the goods that are used on each job, and the department is credited, by the office, with the amount

of the invoices that are issued for all cornice work.

Once a month, the stock-keeper takes stock in the Cornice Department, and, by debiting what goes in, crediting the stock on hand with the total value of the invoices, the firm are able to get a

the amount of the invoice, the profit on this particular order is accurately estimated.

SEND IN TINSHOP PROBLEMS.

Plumber and Steamfitter has made arrangements with W. J. Finnigan, one of the most prominent sheet metal

they are received by Mr. Finnigan, and he will present diagrams showing just how the required patterns should be drawn. All these problems should be addressed to the Editor.

Purchase Order		Dept.	Date
No.		Dept. Foreman	
Quantity	Description		
For what purpose		Wanted by what Date	
Approved		Approved	
		Shop Foreman	

Form 5 101-2m-10-07

Requisition for Purchases

Fig. 2.

pretty good general idea of what the department is doing for them.

Time Sheets.

Each workman in the department is required to fill out a Time Sheet, showing how he employs his time. A sample of this Time Sheet is shown in Fig. 3. It will be noticed that the employe is required to check off on the sheet, just what kind of work he has been doing, this enabling the Cost Accounting Department to estimate accurately, the cost of each operation in completing the work.

When the job is finished and the goods delivered to the shippers, the shop order (Fig. 1) is sent to the office. The Cost Accountant collects all the Time Sheets put in under the Order No. E 1625, and finds that the total amount of productive service put in on this job was 15 hours or the cost of bare labor is \$3.00.

Non-productive Labor.

Now, there is always a certain amount of non-productive labor to be reckoned with. This would include cleaning up, hauling in charcoal, delivering goods to shippers, and such work which goes to make up the overhead expense of the department. In the Cornice Department, it has been found that the overhead expenses are practically covered by adding 100 per cent. of the productive labor costs. In this case it amounts to \$3.00, so that with the cost of material, which has been computed at \$4.25, the total shop cost is \$10.25. This order is also charged with crating .75 and freight .60, making a total cost on the job of \$11.60. By subtracting this from

draughtsmen in Canada, to contribute a number of articles on "Patterns for the Tinshop." Some of these articles are already prepared, and they are illustrated with carefully drafted diagrams which will easily enable any tinsmith to make his patterns by following the description.

In order to make this feature specially valuable, Plumber and Steamfitter invites its readers, anywhere, to send in problems in tinshop patterns which they have encountered in their work. These will be discussed in the order in which

municipal undertakings

Five boilers are to be installed at the Beach pumping station, Hamilton.

Coquitlam, B.C., ratepayers have voted \$150,000 for new roads and \$50,000 for sidewalks.

A by-law to raise \$63,000 for the construction of waterworks, etc., was submitted to the ratepayers of Melville, Sask., on April 25.

T. F. Sinclair's report on sewerage system, etc., for Chilliwack, B.C., estimates the cost at \$67,800, which includes work, material, supplies and guarantee. The scheme proposed by Mr. Sinclair is a flush vacuum system and about 5½ miles of piping will be put down for the price mentioned.

general building

Permits were issued to the Western Home and Improvement Co., Chilliwack, for two dwellings at \$2,700 and two at \$2,300, on Gore avenue; also on Second avenue, \$2,300; First avenue, \$1,400; total, \$6,600.

James Davidson will erect four detached brick houses on Wellington street, Ottawa, to cost \$24,000.

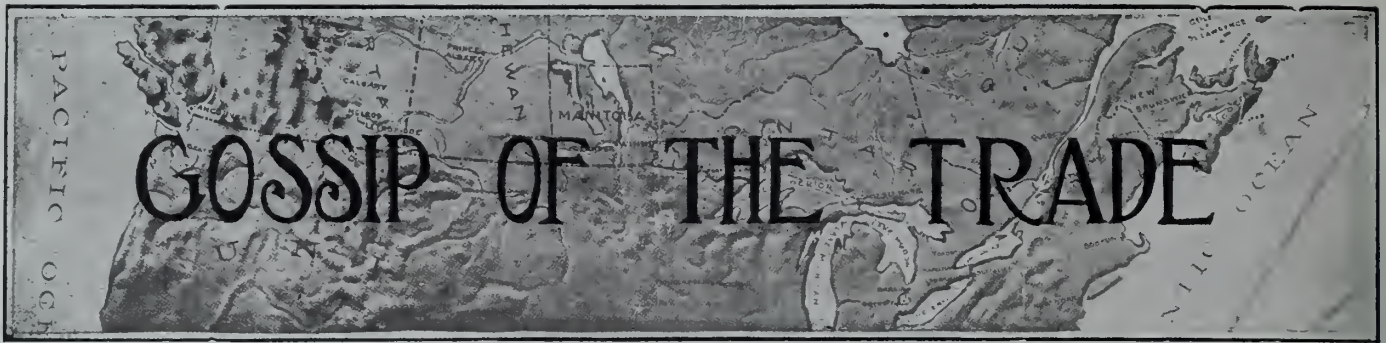
The Methodist church of Smith's Falls, may erect a parsonage.

C.N.R. may establish their Western car shops, at Fort Frances, Ontario.

Monarch Bros., Lethbridge, Alta., will erect two brick warehouses on property south of the present city hall at an outlay of \$20,000.

It is rumored that four storeys will be added to Jacobs' building, St. Catherine street, Montreal, this summer.

Order No.	Dept. D.		Date	Productive Service										
Man's No.	NAME			Detailing										
Quantity	Work Done			Cutt'g Patter's										
				Laying Out										
				Dabbing										
				Braking										
				Hammering										
Damaged				Soldering										
				Forming										
6	1	7	2	8	3	9	4	10	5	11	6	12		
12	1	2	3	4	5	6	7	8	9	10	11	12		
Approved												HOURS.	RATE.	AMOUNT.
FOREMAN														



Running Full Blast.

The plant of the Standard Sanitary Manufacturing Co., at Toronto, is now running full handed.

Buy Out Business.

Harland Bros., Clinton, have disposed of the plumbing and tinsmithing end of their business to R. S. Byam and J. A. Sutter, of Stratford.

Let the Contract.

The Owen Sound hospital board let the contract for the new heating and ventilating plant to be erected in the hospital to Christie Bros. The contract price is about \$3,500.

Contract Awarded.

The refrigerator contract for the Chateau Laurier, the magnificent new hotel being built by the G. T. R. at Ottawa, has been awarded to the White Enamel Refrigerating Co.

Judge to Investigate.

Mr. Justice Teetzel is mentioned as the probable choice of the Ontario Government as commissioner to inquire into the sanitary condition of Ottawa and place the responsibility for the outbreak.

Death of Toronto Man.

George Thamas Ashdown, a Toronto plumber, residing at 239 Albany Avenue, died intestate. He left a total estate of \$1,600 which will be divided among his wife and two children.

Visited Winnipeg.

John W. Bruce recently visited Winnipeg and addressed the Railroad Pipefitters Union No. 479. He remained in the city about a week and then journeyed on to Edmonton en route to the coast.

Tunneling is Begun.

The Superior Heating and Plumbing Co., Fort William, have started work tunneling under the railway at a point near Brodie Street to provide for the carrying of high pressure mains from the tunnel down as far as Finlayson Street.

Scaffold Collapsed.

William Turnbull and Thomas Higgins, employed by W. H. Turnbull, plumber and tinsmith, Brantford, were injured on April 15 by the collapse of a scaffold on which they were working. Turnbull sustained a gash in the head, while Higgins was injured about the back.

Want 8-Hour Day.

The plumbers of Port Arthur have presented a new agreement to the master plumbers, asking for an 8-hour day instead of 9 hours, and also for Saturday afternoons off during the months of June, July and August. The schedule will likely remain as it is at 60 cents an hour. If accepted, the schedule will go into effect on May 1.

Building Trades Join.

The various building trades unions of Hamilton have made an arrangement by which they will positively refuse to work on a job on which any non-union men are employed, whether they be engaged in their particular trade or any other of the building trades. By it will be affected the carpenters, plumbers, electrical workers and possibly the bricklayers and masons.

A Business Change

A little over three years ago, the firm of George E. B. Grimyer & Co., Guelph, was formed. Starting with a cellar as a base of operations, Mr. Grimyer has worked up his business until it now comprises plumbing, heating and electrical work, as well as a machine shop. Recently J. Doughty bought out the interest of H. Heather and is now associated with Mr. Grimyer in the management of the plumbing and heating. H. E. Bates, formerly of New York, is in charge of the electrical department. The shop has recently been improved very much, a modern front being put in.

"Ideal" Gas Stoves.

The Ideal Manufacturing Co., Detroit, have mailed us a copy of their new catalogue No. 15, which illustrates the "Ideal" gas stoves and ranges, gas heater, and appliances generally. The "Ideal" lines this year show a number of new and practical features. Among the new ideas include the "Centrifugal" burner, the Ideal safety oven lighter, the 1911 pattern sensitive door catch, the Ideal door spring renewer, and lastly, a new japan-enameled finish, which gives a jet black, smooth, mirror surface.

Old Business Sold Out.

The plumbing and heating business of H. Shotton, Kamloops, B.C., which has been established for the last twenty-five

years, has been sold to Sjoquist Bros. E. C. Sjoquist has been connected with the firm for some time past and is a practical and progressive business man. A. E. Sjoquist, the other member of the firm is also well known in town, having been employed in the city clerk's office for some time past. Owing to the large number of contracts in hand and the prospects of a very busy season for the firm, Mr. Shotton will not sever his connection with the business altogether but will remain in charge for some time.

MODERN FACTORY EQUIPPED BY HAMILTON FIRM.

Dickinson & Allan, corner Barton and Emerald Sts., Hamilton, have just completed a notable job in the factory of the Otis-Fenson Elevator Co., in that city.

This factory, which is said to be one of the best equipped in Ontario, is now run and lighted by means of three large electric generators, direct connected, the company making their own electric light and power.

The resetting of the four boilers, and changing of all steam and water pipes and replacing pumps, was accomplished without closing down the factory for a minute.

Dickinson & Allan also installed a Webster Vacuum Heating System throughout the factory and new water mains and hydrants in the factory and grounds.

News Briefs.

The Bannatyne Co., steamfitters, are building a plant on Wall Street, Winnipeg.

T. C. Callen and Chas. Cassidy are starting a plumbing business at Wainwright, Alta.

R. G. Leaman, Toronto, plumber and stationer, has sold his stationery business to C. W. Walton.

W. J. Dawson is opening a plumbing business in Blairmore, Alta., in the building belonging to P. Burrus.

Germain & Co., tinsmiths, St. Romuald, Quebec, are reported to have made a voluntary assignment.

Hamilton & Stott, St. Thomas, have received the contract for the plumbing in the Monarch Knitting factory.

Reform Measure is Adopted in Maine

**Plumbers Must be Represented on all Boards of Health—
Plumbing Inspectors are to be Appointed—Other Progressive
Clauses are Included.**

A new law has gone into effect in Maine to govern plumbing work, which possesses many points of merit. It is in every sense a reform measure and should very radically remedy matters in that state. Some of the clauses are as follows:

Sec. 1. The words practical plumber, as used in this act, shall mean a person who has learned the business of plumbing by working for at least two years as an apprentice or under a verbal agreement for instruction, and who has then worked for at least one year as a first-class journeyman plumber.

The word journeyman, as used in this act, shall mean a person who himself does any work in plumbing which is by law, ordinance, by-law, rule or regulation subject to inspection.

Sec. 2. In every city or town where there is a system of water supply or sewerage the Board of Health may, within three months after the provisions of this act, take effect, and thereafter whenever necessary, appoint one or more inspectors of plumbing, who may or may not be residents of the town or city for which they are appointed, and who shall hold office for one year, and in every city or town where there is a system of water supply or sewerage at least one member of the Board of Health shall be a practical plumber within the meaning of this act.

Sec. 3. The compensation of said inspectors shall be determined by the board appointing them, subject to the approval of the municipal officers, and shall be paid from the treasury of their respective cities or towns. Such inspectors shall inspect all plumbing for which permits are granted within their respective cities or towns, which is in process of construction, alteration or repair, and shall report to said board all violations of any law, ordinance, by-law, rule or regulation relative to plumbing; and also perform such other appropriate duties as may be required. The approval of plumbing by any inspector other than those provided for by this chapter shall not be a compliance with the provisions hereof.

Sec. 4. No inspector of plumbing shall inspect or approve any plumbing work done by himself, or by any person by whom he is employed, or who is employed by or with him; but in a city or town which is subject to the provisions of this chapter, the Board of Health shall appoint an additional inspector of

plumbing, in the same manner and subject to the same qualifications as the regular inspector of plumbing, who shall inspect, in the manner prescribed in this chapter, plumbing done by the regular inspector or by any person by whom he is employed, or who is employed by or with him. Said additional inspector may act in case of the absence or inability of the regular inspector, and shall receive for his services the same compensation as the regular inspector for a like duty.

Sec. 5. Each city or town which has therein a system of water supply or sewerage, shall, by ordinance or by-law, within three months from the time this act takes effect, prescribe regulations for the materials, construction, alteration and inspection of all pipes, tanks, faucets, valves and other fixtures by and through which waste or sewerage is used and carried; and shall provide that such pipes, tanks, faucets, valves or other fixtures shall not be placed in any building in such city or town, except in accordance with plans approved by the inspector of plumbing or by the Board of Health; and shall further provide that no plumbing shall be done, except to repair leaks, without a permit being first issued therefor, upon such terms and conditions as such cities or towns shall prescribe. The provisions of this section shall not prevent Boards of Health from making such regulations relative to plumbing and house drainage authorized by law prior to the time when this act takes effect as are not inconsistent with any ordinance or by-law made under the authority of this section.

Sec. 6. Whoever violates any provision of this chapter or any ordinance, by-law or regulation made hereunder, shall be punished by a fine of not less than ten nor more than fifty dollars for each offence.

Sec. 7. The provisions of this chapter shall apply to all persons learning the business of plumbing when they are sent out to do the work of a journeyman plumber.

Sec. 8. Any person who now holds an appointment as inspector of plumbing may retain his position, and, without further examination, be deemed to have been appointed under the provisions of this chapter.

Sec. 9. Inspectors of plumbing and Boards of Health shall annually, before the first day of June, make a full report in detail to their respective cities or

towns of all their proceedings during the year under the provisions of this chapter.

Sec. 10. Municipal and police courts and trial justices shall have jurisdiction of all complaints and prosecutions under this act.

Sec. 11. All acts or parts of acts inconsistent herewith are hereby repealed.

General Building.

The Sydney Post, Sydney, B.C., will erect a new building.

The Geo. H. Mason Lumber Co. will erect a planing mill near Ottawa.

A new provincial asylum may be erected at Toronto at a cost of \$150,000.

Work will be started on the new court house at Winnipeg, as soon as the plans have been finally revised. The cost is estimated at \$500,000.

George Moreau is building a four-storey hotel, with 76-foot frontage by 38 feet deep, at the corner of Berri and St. Louis streets, Montreal.

A block of new stores is being erected for R. H. Millar, on the corner of Bank street and Roseberry avenue, Ottawa. There will be apartments above.

Work will be commenced in May on a new seminary at St. Boniface, Man. The building will be of white Tyndall stone and will cost about \$200,000.

Carrick, Limited, have purchased property at the corner of St. Catherine and Peel streets, Montreal, for a syndicate who propose to erect a big hotel on the site.

A new seven-storey building is to be erected by the Bible Society on Howe street, Vancouver. The building will be of steel and concrete construction with stone base and columns.

Uncle Hiram (looking at bathtubs in a plumber's window)—"Well, I swan! I've heard that these here New Yorkers are pretty nerry, but I never supposed they had the cheek to take a bath in the front window!"—Judge's Library.

Among the buildings to be erected at Vancouver are: A three-storey structure on Seymour street for the Norton Griffiths Co., to cost \$45,000; a four-storey block on Cordova street, to cost \$30,000; a new building on Canton St., for the Lee Yick Co., to cost \$16,000.

Fred. Cook, of the Press Gallery, Ottawa, is preparing to publish a work entitled "Who's Who in Canadian Manufactures and Industries." The book will be in the nature of a book of reference, giving interesting facts regarding the officers, proprietors and directors of Canadian manufacturing industries.

H. Shotton, of Kamloops, B.C., has sold his plumbing business to Sjoquist Bros.

PLUMBING AND HEATING MARKETS

TORONTO.

Toronto, April 27.—Although the backwardness of the season has made itself felt to some extent, the demand for plumbing and heating goods is growing. There has been a marked improvement during the past week but even yet the volume of business does not equal that done at this time of year during 1910. No complaints are being voiced, however, as there is abundant evidence of an unusually busy season ahead. No one has given up hopes of finding 1911 the best year on record.

Prices have remained quite steady during the past two weeks. A slight increase is noted in cast iron fittings while solder prices are a little easier. Otherwise no changes have been made.

Enamelware.—There is a good lively demand for enamelware. Although building operations have been delayed by the unfavorable weather conditions, sufficient progress has been made to create an early demand for all varieties of enamelware. The prices have remained stationary and no changes are likely to occur now for some time at least.

Boners and Radiators.—The demand has been quite as good as can be expected at this season of the year. Local supply houses report that orders have been coming in briskly, but the majority are for future requirement. Many orders are being held up as a result of the delay in building operations. At one local house, a number of large shipments have been ready for some time now to be sent out but the buildings have not been progressing as well as had been anticipated. It is quite apparent, however, that the present year is going to prove a record-breaking one in the heating line.

Soil Pipe.—There is a rapidly increasing demand for soil pipe. Although the frost is not yet out of the ground outside work is being undertaken on a more or less wide scale. The discount on heavy and medium soil pipe stands at 70 and 10. A discount of 50 per cent. is still allowed on the 7 and 8 inch sizes. Some difficulty is reported in securing light soil pipe, but the demand is very small.

Lead Pipe.—The demand is satisfactory. Prices are remaining firm. Lead waste is quoted at 9c per lb., with a 30 per cent. discount. Caulking lead is quoted at 4½c. per lb.; traps and bends show a discount of 50 per cent.

Iron Pipe and Fittings.—There is a fairly brisk tone, although the demand is not yet as active as might be expected at this time of year. One change of price has been made, cast iron fittings now selling at a discount of from 65 to 70 per cent. instead of 65 to 75. Malleable fittings stand at 37½ to 40 per

cent. Cast iron bushings are 70 and malleable run all the way from 65 to 70. Nipples remain firm at 75 and 10, but 67½ is allowed by some firms on headers, while others still quote 60 and 10. Flanged unions stand at 70; malleable-lipped unions, 65 to 67½c.; galvanized pipe, \$6.18; black pipe, 1-inch size, \$4.54.

Solder.—There is a slightly easier tone to solder. Half-and-half sells at 24c and 25c while wiping is bringing 21c to 22c. There is a good brisk demand.

Metals.—There is a good healthy tone

to the metal markets locally. Orders are being received in large number and for large bulk. The dullness reported on the other side of the border certainly has not spread this far. Metal men are not at all apprehensive that the active state of the Canadian market will be superseded by duller conditions, either now or later on.

There are few developments in the matter of price this week. Tin is a little firmer and it is reported that there are indications of another advance in antimony. Outside of this, everything has been quiet during the past two weeks.

Master Plumbers Successfully Oppose Legislation

Halifax.—The master plumbers successfully opposed the suggestions advanced by medical health officer, Dr. MacAulay, to amend the plumbing by-law. The proposed changes were considered reactionary. Among other things it was proposed to add a new section to the plumbing by-laws and repeal several others, the result being to permit master plumbers to send any practical men they saw fit to do plumbing work in the city, and that the journeymen plumbers certificates would not be required.

At the last meeting of the board, Donald Cummings, of the Plumbers' Union was present and asked a number of pertinent questions.

"Is sanitary plumbing necessary for the health of the city?" asked Mr. Cummings.

The chairman—"I think we all agree as to that."

Mr. Cummings—"Do you see anything in the plumbing act to prevent a woman, a blind man, a carpenter or a dry goods clerk carrying on a plumbing business?"

The chairman—"The engineer tells me the only qualification is 21 years of age, except that the plumber is referred to as 'he.'"

Mr. Cummings—"Is there anything to prevent a blind man?"

The chairman—"I would say no."

A letter was read from City Engineer Doane, opposing the amendment most strongly. "The work of nearly twenty years," he wrote, "would be swept away and instead of any certificate of competency for the men doing the plumbing work in Halifax, there would be no standard whatever. No more certificates would be issued and a man might come from Germany or anywhere else, claiming that he was a practical plumber and nothing in our law would prevent him from working in Halifax in competition with men who have spent a lifetime on it."

In view of the facts brought forward by the opposition, the motion was withdrawn.



Next!—St. Louis Democrat.

FIRM BURNT OUT.

The firm of Whiteford Bros., Regina, were the victims of a serious fire a fortnight ago. They owned two buildings, one alongside the other, having purchased this property but a few days before the fire, paying a good round sum. One of the buildings had been used as a store, and this was nearly burnt out, but most of the valuable stock was saved. The loss will be covered pretty largely by insurance. Whiteford Bros. are now getting plans out for a two-storey brick building. The fire occurred at an extremely unfortunate time, as the firm had a great deal of work on hand.

Has Foot Crushed.

George Siddon, an employe of the Standard Plumbing and Elevator Co., Winnipeg, met with an accident while at work on the new Bank of Montreal building, his foot being crushed by the fall of a heavy plank. It was at first thought that amputation would be necessary, but it is likely that it will be saved.

CONVINCING PROOF

of superiority and unqualified approval of the "NATIONAL" and "IMPERIAL" Closet combinations, is in the ever increasing demand we are receiving for these goods.

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'TIS A CONSUMMATION DEVOUTLY TO BE WISHED.—Hamlet

STRICTLY Solder Gives Perfect Satisfaction



This solder means more than a mixture of tin and lead. The raw material is selected with care and all impurities are eliminated.

WHEN ORDERING SPECIFY

STRICTLY

The Canada Metal Co. Limited, - Toronto

CAST IRON FITTINGS

Being manufacturers of Cast Iron Fittings exclusively, we are naturally in a position to give quality the first place, which accounts for the high standard maintained.



That our fittings are being recognized by the trade as a standard is proven by our largely increased sales which have made the installation of additional machinery necessary.

Standard Fitting & Valve Co., Ltd. - Guelph, Ont.

To the Manufacturer or Wholesaler—

If it were possible to employ a traveller who could call on thousands of the best dealers all through Canada every week, what salary would you figure he'd be worth—even supposing he did nothing more than go in and shake hands with these dealers, under such circumstances they'd be glad to see him.

Would he be worth \$200, \$300 or \$500 per week? Many a house would pretty nearly let him fix his own salary.

Equip an advertisement in this paper with a verbal handshake for every dealer in Canada, and a frank, brief, pointed talk about your goods and you add a traveller to your staff who will make thousands of calls a week for you at a salary of \$4 to \$8 a week—less than you would pay a first-class stenographer.

Of course this traveller won't displace any of your regular salesmen, but he will help them to sell more goods and open up more new accounts.

Condensed or "Want" Ads.

MISCELLANEOUS.

ADDING TYPEWRITERS write, add or subtract in one operation. Elliott Fisher, Limited, Room 314, Stair Building, Toronto.

ACCURATE COST KEEPING IS EASY if you have a Dey Cost Keeper. It automatically records actual time spent on each operation down to the decimal fraction of an hour. Several operations of jobs can be recorded on one card. For small firms we recommend this as an excellent combination—employees' time register and cost keeper. Whether you employ a few or hundreds of hands, we can supply you with a machine suited to your requirements. Write for catalog, International Time Recording Company of Canada, Limited; office and factory, 29 Alice Street, Toronto.

COPELAND-CHATTERSON SYSTEMS—Short, simple. Adapted to all classes of business. Copeland-Chatterson-Crain, Ltd., Toronto and Ottawa. (tf)

COUNTER CHECK BOOKS.—Write us to-day for samples. We are manufacturers of the famous Surety Non-Smut Duplicating and Triplicating Counter Check Books and Single Carbon Pads in all varieties. Dominion Register Co., Ltd., Toronto.

COUNTER CHECK BOOKS—Especially made for the plumbing and steamfitting trade. Not made by a trust. Send us samples of what you are using—we'll send you right prices. Our holder with patent carbon attachment has no equal on the market. Supplies for binders and monthly account systems. Business Systems, Limited, Manufacturing Stationers, Toronto.

DOUBLE your floor space. An Otis-Fensom hand-power elevator will double your floor space, enable you to use that upper floor either as stock room or as extra selling space, at the same time increasing space on your ground floor. Costs only \$70. Write for catalogue "B." The Otis-Fensom Elevator Co., Traders Bank Building, Toronto. (tf)

EGRY BUSINESS SYSTEMS are devised to suit every department of every business. They are labor and time savers. Produce results up to the requirements of merchants and manufacturers. Inquire from our nearest office. Egray Register Co., Dayton, Ohio; 123 Bay St., Toronto; 258½ Portage Ave., Winnipeg; 308 Richards St., Vancouver. (tf)

FIRE INSURANCE. INSURE IN THE HARTFORD. Agencies everywhere in Canada. (tf)

MOORE'S Non-Leakable Fountain Pens. If you have fountain pen troubles of your own, the best remedy is to go to your stationer and purchase from him a Moore's Non-Leakable Fountain Pen. This is the one pen that gives universal satisfaction and it costs no more than you pay for one not as good. Price \$2.50 and upwards. W. J. GAGE & CO., Ltd., Toronto, Sole Agents for Canada.

INDISPENSABLE in Office, Store, Home—Canadian Almanac, 1911—a National Directory. Complete classified information on every subject of Dominion interest. Full postage, customs banking, insurance; legal, educational, newspaper, army, clerical, governmental, particulars of leading institutions and societies. Paper covers, 6 Jc.; cloth leather bink, 75c. All stationers, or sent postpaid on receipt of price by The Copp-Clark Co., Ltd., Toronto.

KAY'S FURNITURE CATALOGUE No. 306 contains 160 pages of fine half-tone engravings of newest designs in Carpets, Rugs, Furniture, Draperies, Wall Papers and Pottery with cash prices. Write for a copy—it's free. John Kay Company, Limited, 36 King St. West, Toronto.

WAREHOUSE AND FACTORY HEATING SYSTEMS. Taylor-Forbes Company, Limited. Supplied by the trade throughout Canada.

MODERN FIREPROOF CONSTRUCTION. Our system of reinforced concrete work, as successfully used in many of Canada's largest buildings, gives better results at lower cost. "A strong statement" you will say. Write us and let us prove our claims. That's fair. Leach Concrete Co., Limited, 100 King St. West, Toronto.

PENS—The very best Pens made are those manufactured by William Mitchell Pens, Limited, London, England. W. I. Gage & Co., Limited, Toronto, are sole agents for Canada. Ask your stationer for a 25c. assorted box of Mitchell's Pens and find the pen to suit you.

THE "Kalamazoo" Loose Leaf Binder is the only binder that will hold just as many sheets as you actually require and no more. The back is flexible, writing surface flat, alignment perfect. It cannot get out of order. No exposed metal parts or complicated mechanism. Write for booklet, Warwick Bros. & Rutter, Ltd., King and Spadina, Toronto.

YOU don't buy a National Cash Register—it pays for itself. Saves money. Prevents mistakes. We can prove it. National Cash Register Co., 285 Yonge Street, Toronto.

ARTICLES FOR SALE.

FOR SALE—18 school or factory Closets, Wolff's H7740, bowl H7755; 16 5" x 4" T.Y.'s X.H., 24" long; 1 slate urinal, complete with tank, 20 ft. long, no floor slab, Wolff's H8720; 3 drinking fountains, Wolff's 6940. These fixtures were used but a short time and are in excellent shape, they cost about \$600. Will sell in bulk or in part, anything like a reasonable offer will be considered. T. J. MINNES & CO., Brantford, Canada. (9)

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PRACTICAL HINTS ON JOINT WIPING, for beginners in plumbing. This book contains two original articles on joint wiping by experts, together with a selection of letters and articles on various important phases of the subject. 66 pages, 41 illustrations. Price 25c.

MACLEAN PUBLISHING CO., Technical Book Dept., 143-149 University Avenue, Toronto.

MISCELLANEOUS.

HUNDREDS OF TYPEWRITERS of every make and condition are being traded in as part payment on the famous MONARCH. Price and quality are the levers we use to prevent over stock. We believe we can give the best bargains in rebuilt typewriters in Canada. A postal will bring our catalogue and full information. The Monarch Typewriter Co., Limited, 46 Adelaide Street West, Toronto.

MULTIPLE TYPEWRITING and real printing turned out by the Multigraph in your own office will get more business and reduce printing bills—saves 25% to 75% of average annual printing cost on stationery, system forms and circulars. Write for particulars. American Multigraph Sales Company, Limited, 129 Bay Street, Toronto, Ont.

THE WANT AD.

The want ad. has grown from a little used force in business life, into one of the great necessities of the present day.

Business men nowadays turn to the "want ad" as a matter of course for a hundred small services.

The want ad. gets work for workers and workers for work.

It gets clerks for employers and finds employers for clerks. It brings together buyer and seller, and enables them to do business though they may be thousands of miles apart.

The "want ad." is the great force in the small affairs and incidents of daily life.

Nature has solved the problem of distribution. It uses a multitude of agents to effect the distribution of its products.

Nature does not expect every seed to fall upon fallow ground and to take root. But, it achieves a profitable percentage upon its distribution. This is all that an advertiser has to do to reap a profitable harvest on his outlay.

In either event you could not be better prepared for business and its emergencies—equipped with

"Vulcan-Bijaws"

- 1.—The jaws easily changed end for end, as teeth first in use wear, give you the service of two wrenches at the cost of one.
- 2.—The fastening of jaws to handle is a strong "Vulcan-Bijaw" characteristic. Either of the bolts provides full working strength of tool; in emergencies shift them and go ahead, but the cost is just the same as for "no-help" constructions.
- 3.—Any "one-sided" tool does not give you a central swinging chain (always right side up) but the cost is just the same as for a "Vulcan-Bijaw."
- 4.—You may not have occasion to use tools to their limit of strength, but you will find "Vulcan-Bijaws" with unsurpassed backbone and they cost no more, because they are guaranteed peerless in strength and utility.



Work OR War!

Discount from Dealers.

J. H. Williams & Co.,

SUPERIOR DROP-FORGINGS

77 RICHARDS ST., BROOKLYN, N.Y.

DIRECTORY OF MANUFACTURERS

Plumber and Steamfitter receives, from time to time, enquiries for the names of manufacturers of various lines. These enquiries come from firms who usually intimate they have looked through Plumber and Steamfitter but cannot find any firm advertising the line in question. In many cases these firms are anxious to secure the information at once. This page enables manufacturers to keep constantly before the trade lines which it would not pay to advertise in larger space.

EMERY WHEELS

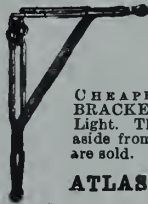


Canadian Hart Wheels

442 Barton St. East, Hamilton

Corundum and Emery Wheels
Grinding Machines, Beaver
Oil Stones.

SHELF BRACKETS.



Will Hold Up a Shelf

That's what a shelf bracket's for
For this purpose there can be
NOTHING BETTER, NOTHING
CHEAPER than the BRADLEY STEEL
BRACKET. It is well Japanned, Strong and
Light. The saving on freight is a good profit
aside from the lower price at which the goods
are sold. Order direct or through your jobber.

ATLAS MFG. CO., NEW HAVEN

FILTERS.

Anti-Splash Tap Filters

The "Galvo" Filter and Water Steriliser
"Perfection" Fire Extinguishers

There's good money in them for hardware dealers.

Write for Prices.

The Anti-Splash Filter Co.
OWEN SOUND . . . ONTARIO

MANUFACTURERS' AGENTS.

The Manufacturers Sales Co.
MONTREAL

Frederick H. Reid, Manager

Representing manufacturers of high-class specialties,
including "Handhook," "So-Clean," and others.

We are open at any time to receive propositions from
first-class manufacturers who wish to be represented in
Canada. Write at once. Best of references.

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Western Distributors, Limited
CUSTOMS BROKERS

Wholesale Commission Merchants and Manufac-
turers' Agents. Cars Distributed, Warehoused
and Forwarded. Warehouse on Trans-
fer Track. Business solicited.

OUR POSITION IS YOUR OPPORTUNITY
SASKATOON, WESTERN CANADA

BRONZE POWDERS

BRONZE LIQUIDS

The
Canadian Bronze
Powder Works
Montreal Toronto
Works, Valleyfield

Send us your orders and we guarantee the
quality



THIS IS THE DAY OF INVESTIGATION

Get in line and let us prove
to you that the

GENUINE
Armstrong Stocks and Dies

ARE THE BEST.

Catalogue on request.



The Armstrong Mfg. Co.
317 Knowlton St.
Bridgeport, Conn.

When writing advertisers kindly men-
tion having seen the advertisement in
this paper.

TINSMITHS' HELPER AND PATTERN BOOKS



A useful handbook for Tinnerns and Sheet Metal
Workers. It treats the simpler problems in pattern
cutting occurring daily in the shop besides giving tables
and information constantly needed by the mechanic.

Section 1—DIAGRAMS and PATTERNS. Demonstrates
50 examples of pattern work, such as cutting flared tin-
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Section 2—EPITOME OF MENSURATION. Describes
how to find the area and circumference of a circle, con-
tents of a sphere, etc.

Section 3—TABLES, RULES and RECIPES. Gives the
weights of sheet metals, capacity of cans, recipes for
mixing solders, cements, etc.

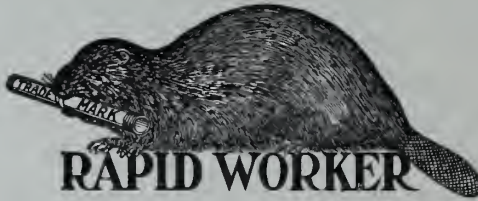
Price \$1.

53 Figures

MacLean Publishing Company
Technical Book Dept. 143-149 University Ave., Toronto, Can.

Nature has solved the
problem of distribution.
It uses a multitude of
agents to effect the distri-
bution of its products.

Nature does not expect
every seed to fall upon fal-
low ground and to take
root. But, it achieves a
profitable percentage upon
its distribution. This is all
that an advertiser has to
do to reap a profitable
harvest on his outlay.

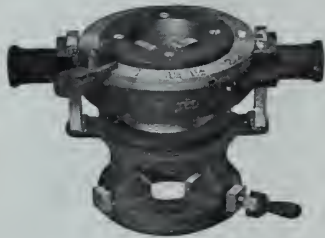


One man with a Beaver Die Stock is worth two or three men with any other Die Stock made.

"Beaver" Adjustable Die Stocks

HAVE cut the cost of pipe threading in two because they will thread all sizes of pipe without changing dies.

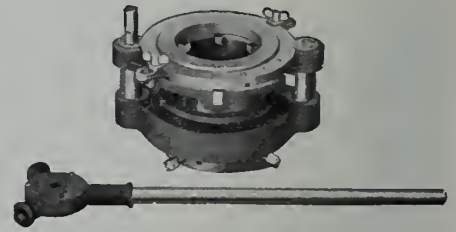
They are built on the receding principle which positively enables one man to thread any size of pipe and produce absolutely tight joints for all work, including hot water. They save the time formerly used up in changing dies and looking after loose parts, and eliminate all of thread-stripping when backing off.



No. 25A, threading 1, 1¼, 1½, 2-inch pipe.
A boy can operate it,



No. 6, threading ¼, ⅜, ½, ¾ inch, complet



No. 60. Uses two sets of dies. One set cuts 2½, 3, 3½ in. the other cuts 4, 4½, 5, 6 in.; they are inserted without removing any parts.

No loose Bushings or loose Dies on No 25A and No 6, and they cut 1, 1¼, 1½ and 2-inch pipes.

We can furnish a separate set of dies for 1, 1¼, 1½ and 2-inch pipe

Write us for Illustrated Price Lists.

BORDEN CANADIAN COMPANY,
66 Richmond Street East
Toronto, Ontario

*The Largest
Brass Factory
in Canada*



is at work all the time producing a full range of

Plumbers' Supplies and Brass Goods

and our special facilities enable us to make prompt shipment. Our goods are noted for their superior finish, accurate fitting and quality of the castings, and are a line that never fails to give every satisfaction

We also make the famous EMPIRE CLOSET—the kind that has banished all 'kicks' from customers, and we specialize on self-closing fixtures—"Empress" brand for Hotels, Public Buildings, etc.

Shipment Made Date Order is Received.

Empire Manufacturing Co., Limited, London, Ontario

Use the Long Distance 'Phone

To order any supplies you may need in a special hurry.

You see, we have been a hundred years perfecting our facilities and we can give you unrivalled service. Under the name of

“SCOTIA” PLUMBING SUPPLIES

We sell all the leading lines of Plumbers' Supplies made in the world.

Big stocks always on hand—prompt shipment made—prices as low as good quality permits.

Wm. Stairs, Sons & Morrow, LIMITED

ESTABLISHED A.D. 1810

Halifax - - - Nova Scotia



You can make the Plant Fit the Work
by using a

SOVEREIGN BOILER



The best grades of materials and designs that are the outgrowth of a thorough experience combine to give "Sovereign Boilers" a long and satisfactory lease of life. They heat rapidly and are unusually economical in coal consumption. The whole story as told in our Catalogue is interesting. Send for it.

Taylor-Forbes Co., Limited

Head Office and Works

GUELPH, ONT.

Taylor-Forbes Co., Ltd., 246 Craig St. W., Montreal, Que. Taylor-Forbes Co., Ltd., 1070 Homer St., Vancouver, B.C. W. R. Mathers, 46 Princess St., St. John, N.B. The Vulcan Iron Works, Winnipeg, Man. The Mechanics Supply Company, Quebec, Que.

The Thomson Smoke Test Machine

FOR TESTING PLUMBING

We Claim the Following Facts:

Smoke Production—The greatest smoke producer known.

Simplicity—So simple that a novice can work it.

Sensitiveness—So sensitive that the slightest reduction in pressure will cause the cover to sink.

Durability—No glass gauges to break, or freeze and burst. No valves to clog. Nothing to get out of order.

Portability—A boy can carry it with **one hand**. It is sixteen inches high, 11 inches by 11 inches square.

Smooth and Easy Action—Double acting bellows, which can be worked with one finger.

We guarantee to refund the price of the machine to any purchaser, who, after a fair trial, can say that the machine is not as represented, or will not do all we claim for it.



The **James Morrison Brass Mfg. Co., Limited**

93-97 ADELAIDE ST. WEST,

TORONTO

SUPPLY

"Kerr" Radiator Valves

on your heating work, and
your valve troubles are over

The

**Kerr
Engine**

Co., Limited

Walkerville - Ontario

*We charge the
price and furnish
the reliable goods*

Look for
Our Name
"KERR"
on All
Genuine
KERR
VALVES



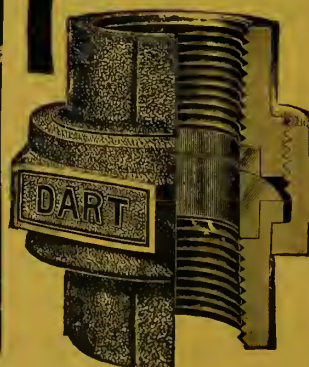
Dart Unions

—the joints that cannot leak or
corrode. They give the most easily
made and perfectly tight joint possible
—a bronze to bronze ball joint instantly
made. The surest satisfaction-giver on the
market.

*Ask your jobber for
DART UNIONS.*

**Dart Union Co.
LIMITED**

Niagara Street
TORONTO



PLUMBER & STEAMFITTER

and Sanitary Engineer of Canada

THE MACLEAN PUBLISHING COMPANY, LIMITED, PUBLISHERS

MONTREAL, 701-702 Eastern Townships Bank Bldg.
LONDON, ENGL., 88 Fleet St. E.C.

TORONTO, 143-149 University Ave.

WINNIPEG, 511 Union Bank Building
NEW YORK, 115 Broadway

Vol. V.

Publication Office : TORONTO, MAY 15, 1911.

No. 10

THE
STANDARD
COMPANY LIMITED
GENERAL OFFICES AND FACTORIES · PORT HOPE · CANADA

DO you know of a new
Barber Shop about
to be fitted up? ☐ ☐ ☐ ☐

? ? ? ?

If so, suggest this hand-
some, practical, space-
saving Double Lavatory,
enameled all over.

It can stand free in centre
of shop or against wall.

F1084

BRANCH OFFICES AND SHOWROOMS

TORONTO 119 KING STREET EAST	MONTREAL 44 BEAVER HALL HILL	WINNIPEG 76 82 LOMBARD ST
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PLUMBER AND STEAMFITTER

Beaver Brand

Cast Iron Enamel Ware

Noted for Good Color, Durability and Attractiveness



The above cut shows our Wall Lavatory—artistic, sanitary and durable.

One of our leading sellers. Our splendidly equipped plant is producing an unbeatable range of enameled Bath Tubs, Slop Sinks, Kitchen Sinks, Laundry Tubs, Lavatories, Closets, etc., and our customers can be sure of satisfactory goods promptly shipped. A guarantee goes with all Beaver Brand Enameled Ware.

Amherst Foundry Co., Ltd., Amherst, N.S.

ONTARIO SALES AGENT:

MONARCH BRASS MFG. CO., LTD., ¹⁷⁸⁻¹⁸⁰Victoria Street, TORONTO

MARITIME PROVINCES
All Jobbing Houses

MONTREAL, P.Q.
All Jobbing Houses

WINNIPEG, MAN.
E. B. Plewes, 120 Lombard St.

VANCOUVER, B.C.
A. O. Campbell

The Honeywell System OF HOT WATER HEATING

WAS ADOPTED IN THE YEAR 1910 IN

FORTY PER CENT.

OF TOTAL

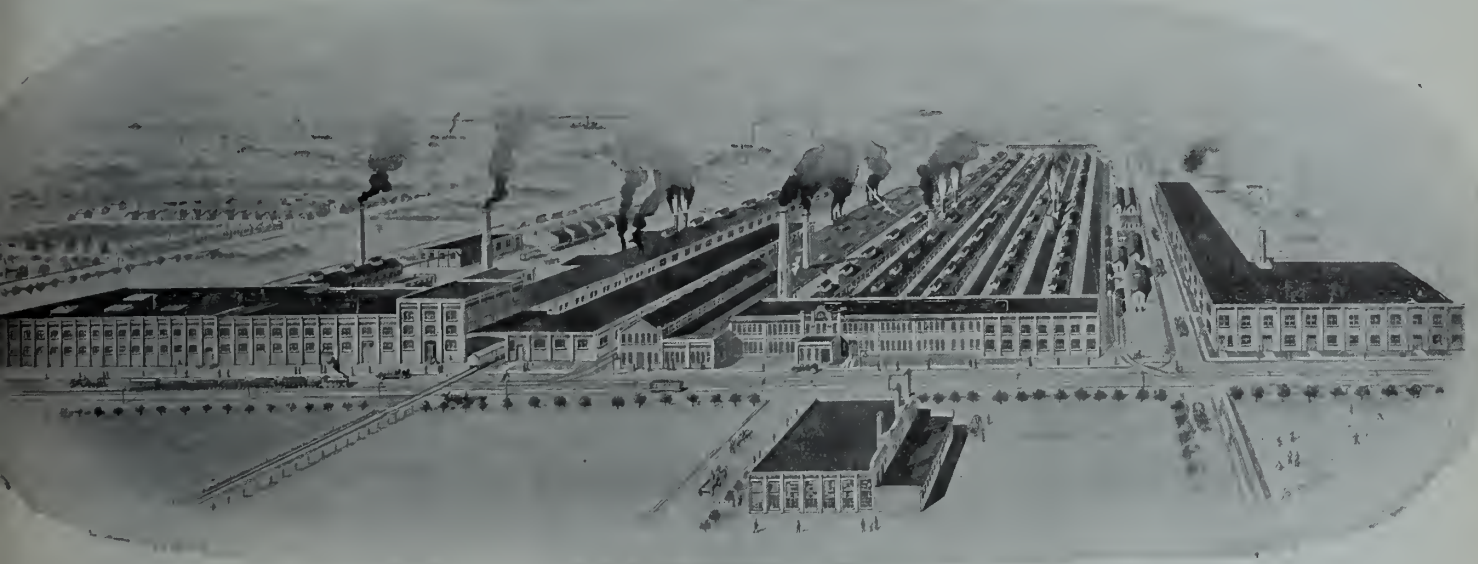
Hot Water Installations Throughout Canada

Upon no other point are Architects, Steamfitters and Proprietors so well agreed as on the Merits of the Honeywell System.

The Honeywell Heating Specialty Company

Frank T. Rawley,
Manager for Canada

Room 1008 Eastern Townships Bank Bldg., Montreal.
Phone Main 4615



Malleable and Cast-iron-pipe Fittings

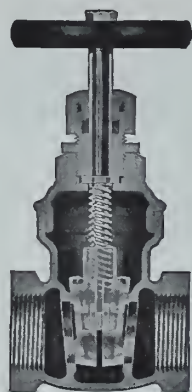
MANUFACTURED BY

FITTINGS LIMITED

OSHAWA

WINNIPEG

MONTREAL



A NEW VALVE

JENKINS BROS.'

GUN METAL AND IRON BODY

GATE VALVES

"TYPE K"

Special Features:

Highest Quality Steam Metal. Perfect Interchangeability. Double Compensating Bronze Wedges. Metal Gland in Stuffing-Box. Great Strength of All Parts. Carefully tested to 250-lbs. Water Pressure

UNRIVALLED IN DESIGN AND WORKMANSHIP

A Thoroughly Reliable Gate Valve for Steam, Water, Oil, Gas or Air. A trial will convince you that it will pay you to use these valves on all your work.

Stamped with TRADE MARK like cut.

Stocked by Machinery, Hardware and Supply Dealers throughout the World.

Catalogue and Full Particulars Cheerfully Furnished on Application.

JENKINS BROS., Limited

Head Office and Works:

102 St. Remi St., Montreal, Canada

And at

95 Queen Victoria St., London, E.C.

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Pertaining to Heating, Lighting, Plumbing and Ventilation. All Orders Payable in Advance.

American Steam & Hot Water Heating Practice	\$3 00	Heating & Ventilating Buildings. House Drainage and Sanitary Plumbing	50	Sanitation in the Modern Home. By J. K. Allen	2 00
American Plumbing Practice	2 50	House Heating by Steam & Hot Water. By C. B. Thompson...	3 00	Sizes of Flow & Return Steam Mains	50
American Sanitary Plumbing. By J. J. Lawlor	2 00	Hot Water Heating, Steam & Gas Fitting, Acetylene Gas—How Generated and How Used. By J. J. Lawlor and Geo. T. Hanchett	2 00	Steamfitters' Computation and Price Book. By Dean	3 00
Baldwin on Heating, or Hints to Steamfitters	2 50	Principles of Heating. By W. G. Snow	2 00	Steam & Gasfitters' Text Book..	5 00
Contract & Estimate Record Book for Plumbers. By B. H. Jessup	1 50	Principles & Practice of Plumbing. By J. J. Cosgrove	3 00	Steam Heating for Buildings. By W. J. Baldwin	2 50
Contract & Estimate Record Book for Plumbers (Pocket edition). By B. H. Jessup	50	Principles of Hot Water Supply. By J. W. Hart	3 00	Steam Heating & Ventilation. By W. S. Monroe	2 00
Contract & Estimate Record Book for Steam & Hot Water Heating. By B. H. Jessup.....	1 50	Questions & Answers on the Practice & Theory of Sanitary Plumbing. By R. M. Starbuck	1 00	Steam & Hot Waterfitters' Text Book. By Thos. E. McNeill...	1 00
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Formulas & Tables for Heating. By J. H. Kinealy	1 00	Sanitary Engineering of Buildings. By W. P. Gerhard	5 00	Lighting by Acetylene Gas, Electric Furnace Generators & Burners. By W. E. Gibbs, M.E.	1 50
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Fifty Plumbing Charts	25	Sanitary Plumbing & Drainage. By J. W. Hart	3 00	Modern Plumbing, Illustrated. By R. M. Starbuck	4 00
Guide to Testing Plumbing. By J. K. Allen	25			Modern Sanitary Plumbing, Steam & Hot Water Heating. By J. J. Lawlor	
Hints to Plumbers on Joint Wiping, Pipe Bending & Lead Burning. By J. W. Hart	3 00			Notes on Heating & Ventilation. By J. R. Allen	2 00

TECHNICAL BOOK DEPARTMENT

MacLean Publishing Co., 143-149 University Ave., Toronto

Fig. I

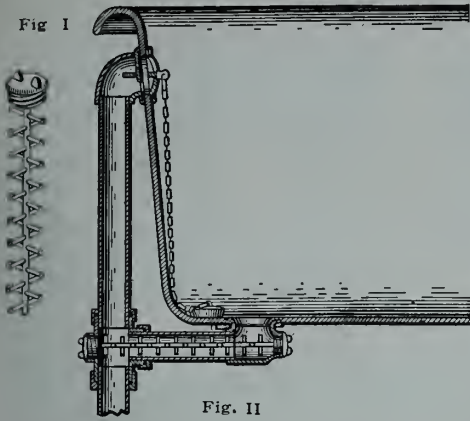


Fig. II

E.N.O. Patent Bath and Waste Overflow

SOMETHING NEW

Here is a Bath Waste and Overflow that can be thoroughly cleaned out from two outlets, viz: back of Bath or underneath. The Cleanout Rod, Fig. I, is made of aluminum, has a ball joint connection to the plug. All the fittings are of cast brass and heavily nickel plated. The whole is got up for use and will stand more abuse than any other Bath Waste in existence. Our patent can be used with any standard bath on the market.

SOLE CANADIAN MANUFACTURERS

Westport Mfg. & Plating Co., Limited
117½ BANK STREET, OTTAWA

VENT

"RAPID" BATH HEATER

NON-VENT

A CUP FULL—A TUB FULL—AN ENDLESS FLOW

of hot water—instantly—day or night—summer or winter—of unequaled convenience for shaving—bathing—or sudden illness requiring hot applications—

The 'Rapid' Instantaneous Bath Heater is easy to operate. Light Pilot—Turn Lever—Hot Water Instantly—A few minutes later when bath is ready—turn down lever and all expense stops.

We are especially anxious to introduce "Rapid" Heaters to the Canadian trade—Our new 1911 Model "F" is the most practical and all around heater on the market.

IF YOUR JOBBER CANNOT SUPPLY YOU, WRITE DIRECT TO

RAPID HEATER COMPANY
(INCORPORATED)
GRAND RAPIDS, MICH., U.S.A.

Plumbers everywhere know our goods and have nick-named us

*"Canada's Most Popular
Specialty House"*

Better Inquire why

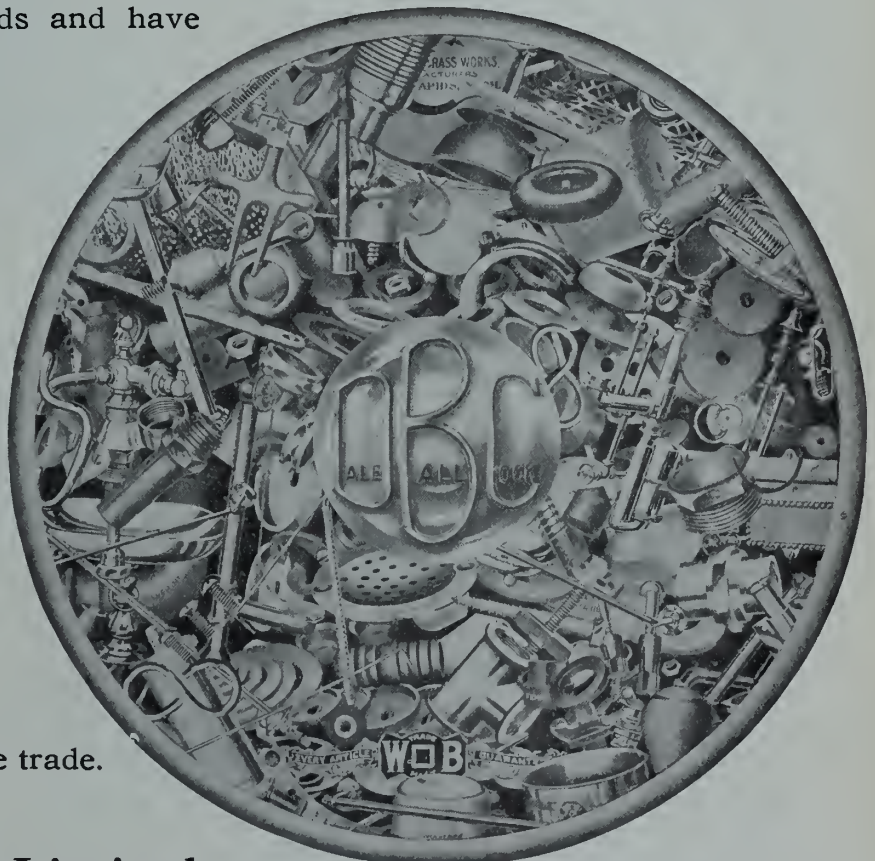
WOLVERINE

*"Our aim is to try to Please
our Customers"*

We handle a most complete
line and guarantee everything we sell the trade.

WRITE TO

Canadian Wolverine Co., Limited
Chatham, - Ontario



"NO BEGINNING, NO END"
TO WOLVERINE SPECIALTIES

BOOKS FOR THE METAL WORKERS

Any of the following books sent prepaid on receipt of price

WRITE FOR CATALOGUE

THE NEW METAL WORKER PATTERN BOOK.

A treatise on pattern cutting as applied to all branches of sheet metal work. By George W. Kirtledge. 430 pages; 744 illustrations; size 10 x 13 inches. Cloth bound. Price \$5.00.

ART OF COPPERSMITHING.

A practical treatise on working sheet copper into all forms. By John Fuller, Sr. 327 pages; 474 engravings; size 10 x 6½ in. Cloth bound. Price \$3.00.

SHEET METAL WORK.

A manual of practical self-instruction in the art of pattern drafting and construction work in light and heavy-gauge metal, including sky-lights and roofing, cornice work, etc. By Wm. Neubecker. 267 pages; 358 illustrations; 6½ x 9¾ inches. Half-Morocco binding. Price \$3.00.

A PRACTICAL WORKSHOP COMPANION.

For tin, sheet iron and copper plate workers. By LeRoy J. Blinn. 296 pages; 170 figures. Size 5 x 7½ inches. Price \$2.50.

SHEET METAL WORKERS' INSTRUCTION.

By Joseph H. Rose. 300 pages. Profusely illustrated. Price \$2.00.

THE ROOFING, CORNICE & SKYLIGHT MANUAL.

175 pages; 170 illustrations and 13 plates; size, 6 x 9½ inches. Cloth bound. Price \$1.50.

BAUGHMAN'S BUYER & SELLER COST TABLES.

A cost book for everybody having cost to figure by the piece, pound, foot or ton, from 2½¢ per hundred to \$10 a hundred. Leather bound. Price \$1.50.

TINSMITHS' HELPER & PATTERN BOOK.

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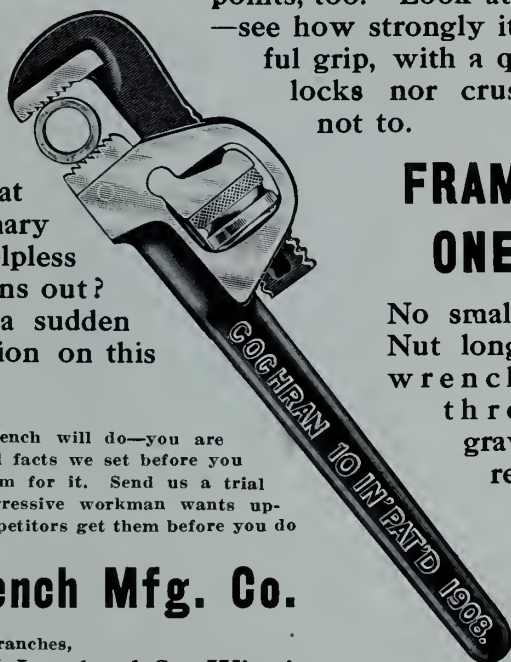
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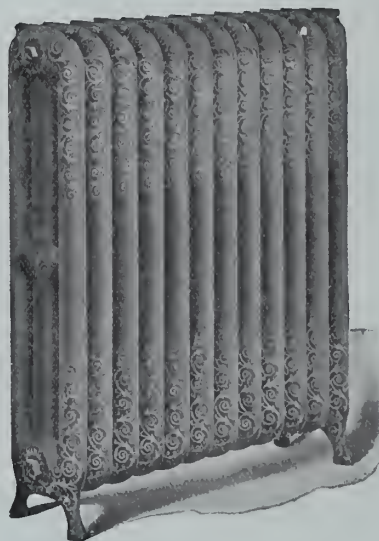
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Simple to instal---Easily adjusted to the work to be done. There's a "King" Boiler for every sized house.



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ters, Sanitary Inspectors, Heating and
Ventilating Engineers, City Engineers,
Boards of Health, Architects, etc.

TORONTO, MAY 15, 1911

From all indications, the convention of the National Association, to be held at Port Arthur and Fort William will be a record breaker in point or size. Reports are being received from all parts of the country, which indicate that an unusual degree of interest is being created. A number of cities have already appointed representatives. Toronto will send from six to twelve delegates, Ottawa is talking of sending seven, Montreal will be right there with a good-sized delegation, and the West should be better represented than ever before.

BIG SUCCESS IS ASSURED

The convention programme promises to be of unusual interest. The Twin City members are already working earnestly to make it a big success. The entertainment features will be well looked after, and steps are being taken to provide plenty of live topics for the business sessions. The officers are determined to conduct the sessions in such a way that every member in attendance will reap much benefit. Several matters of vital importance are to be taken up.

The convention will present a splendid opportunity for the revival of provincial work. Association work will lag, and perhaps some day lapse, if provincial bodies are not organized and kept active. It seems a difficult matter to get the movement started, however. Ontario has fallen into line by organizing the Ontario Society of Sanitary and Heating Engineers—a body which promises to inaugurate a new era in the plumbing trade. Would it not be a good time, when delegates assemble at Twin Cities to attend the national convention, when they are aroused to enthusiastic interest in, and complete endorsement of, association work; would not that be a good time to get the delegates interested in the problem of organization in their own provinces? If the men of each province were to get together for an hour or two, they could lay plans for an energetic campaign. For that matter, one session of the convention might be set aside for discussion of the question of provincial associations, and committees from each province could then be appointed. This would constitute a definite step in the right direction, and it is becoming every day more apparent that some such concerted movement is needed to set the ball a-rolling.

A large attendance is desirable at the convention. Every master plumber who can possibly arrange it should be on hand. It is, of course, a busy time of the year, and many take this excuse for staying away. They do not consider that during the sessions they would probably learn enough to more than compensate them for the short time lost. Start NOW to arrange your affairs so that YOU can go.

In another column reference will be found to a movement started by the journeymen plumbers of Ottawa to establish a library of technical books for the use of the members. The idea is a good one, and well worthy of fullest commendation. To be successful nowadays, a man must inform himself on all phases of the work in which he is engaged. In the case of the plumber, a wealth of valuable information can be secured from the technical books issued, but every man is not in a position to buy all the literature he would like. The establishment of a library simmers down to co-operative buying. Each member is, in that way, given access to the best books on the market at an almost nominal cost.

A COMMENDABLE PLAN BROACHED

The improvement and uplift of the trade is one of the uppermost thoughts in the mind of each and every plumber. All are anxious for the day when the plumber will be recognized for what he is—the Engineer of Health. To speed that day, education is the most potent force. If given full swing, it will soon result in improving the standard of work, and in raising the trade status. Education should begin with the apprentice and work right up through all ranks and branches of the trade.

Any steps taken in this direction is, therefore, worthy of support. Undoubtedly, the establishment of libraries would do much good, and the example set by Ottawa might well be followed.

An Ontario master plumber recently returned from a trip through the West. "I found," he said, "that jobs which I did for \$130 here brought \$275 there. Part of that huge difference was due to freight rates and the higher cost of material and labor, but a good part of it was owing to the fact that the men who got \$275 were not afraid to ask for

DO NOT ASK A FAIR PRICE

a fair price for their work. I am going to quit price-cutting." There is neither poetry nor fiction in this summing up of conditions as they exist in the East and the West. There is a certain amount of price-cutting done in the West, as well as elsewhere, but, from all reports, that evil flourishes more abundantly in the East. There is probably another reason for this. In the West the people are prepared to pay more. They spend freely and do not stop to consider expense. In the East, people cling to old-time customs, and believe in keeping expenses down. It is, however, in the power of the Eastern plumbing fraternity to educate the public to take a more liberal and sensible view of the matter.

In a recent issue, The Plumbers' Trade Journal gave editorial space to the views of a manufacturer who claimed that the jobbers in the United States were cutting prices to the very bone. The matter was treated by the

WHOLESALE PRICE-CUTTING

ments equally strong, the manufacturer said:

"Closets that in 1882 sold for \$40 are now being bought for \$8 and \$8.50. I learned of a case only a short while back, where seven hundred were sold in Chattanooga, Tenn., at a supposed profit of 38 cents each, this being a year's supply to seven plumbers. In another instance at Columbus, Ohio, I ran across a job in which \$1,500 worth of steam pipe and valves had been sold at a net profit of \$7.50.

"Where does your master plumber come in in all this? He must realize that the goods he is purchasing so cheap are not good goods. What sort of a job or jobs does he intend to use such cheap material on, and can he make any profit himself?"

If these facts are correct, it is quite apparent that, in some quarters at least, the trade has fallen upon evil days in the United States. It is not likely that the master plumber will be found voicing loud complaints when the jobbers show a tendency to cut prices. But if there is room to suppose that, in order to slash prices, the jobbers are supplying poor quality goods, then it is ample time for the plumber to look elsewhere. The sale of cheap goods is bound to affect the business of the plumber first. His customers will notice the defects in time, and look to him for redress.

The lack of proper business methods has caused many a failure in the plumbing business. Too many plumbers have been content to learn the practical side, and have paid little heed to what is equally important, the "office management" of the business.

GET DOWN TO BUSINESS

This has been stated so often that it must now be quite familiar to all members of the trade but repetition is needed to create a proper impression of the real importance of the problem. Most plumbers find it the hardest of problems to solve. How can I improve my methods of looking after the business to prevent the leakages which are eating up the profits?

There are many firms in a position to boast of splendid business systems, built up as a result of close observation of existing conditions. Those in less fortunate position, cannot do better than adopt some of the ideas successfully used by others in the trade. In the present issue, an outline is given of the progressive methods followed by T. A. Cowan & Co., Brantford. It will be seen by perusal of the article that all losses in connection with material taken out are guarded against, that provision has been made for accurate time accounting and that sensible measures have been adopted for attending to orders, collecting accounts and looking after estimates. The system, in fact, is complete and readily adaptable to any business.

One phase of the system followed out by Cowan & Co. is particularly commendable. We refer to the method adopted of attending to prospects. A man is kept busy almost continually following up hints received as to possible customers. If a man visits the store and asks for

figures on bathroom equipment, or prices on electrical fixtures, and leaves without purchasing, his name is entered on a printed slip, provided for the purpose. The "outside man" is then instructed to call upon him and see if he cannot effect a sale. These calls are kept up until the sale is made. In this way a splendid volume of business is secured, more than sufficient to warrant the carrying of a man for that purpose.

The positive stagnation which characterizes the metal market in the United States, just now, is to a certain extent reflected in this country and there is no disguising the fact that the consumption of metal generally is below the level reached a year ago.

THE METAL SITUATION.

Building operations are unprecedentedly heavy, and all the principal Canadian railways are spending large sums both in construction and equipment. In the face of these outward evidences of prosperity, it is somewhat of a puzzle why buying of metals should be on such a cautious scale.

The uncertainty existing in the United States is also felt here, regardless of tariff walls and separate nationalities. Buyers in the former country are afraid to purchase for future requirements, in view of the possibility of tariff changes and judicial decisions affecting the earning powers of important interests. On this side of the line, caution is also being exercised, due either to the influence of the United States, or to the expectation of lower prices, or both.

A disquieting fact is that, although most manufacturers of metal products are very busy, trade in general is being conducted upon a very close margin of profit, which gives rise to uneasiness and consequent fear of buying too largely for the future.

In comparing the situation with the record of a year ago, it is well to remember that the first half of last year produced very heavy business in the metal trade, while the second half fell off badly. This year, the first few months have been fairly active, but certainly below the same period last year. It now remains to be seen what the second half of the year will bring forth. If the weather becomes more favorable and good crops result throughout the country, the second half of the year should show considerable improvement.

Build up the provincial associations.

Rigid legislation against mail order houses is pending in Missouri. In the state where ocular demonstration is deemed necessary, the legislature is considering a measure to impose a state tax on these concerns. The tax would be placed on the amount of business done and would work on a sliding scale. It is quite frankly admitted that the idea is to assist the home trader.

"Think of it! There are less than 500 plumbers in the United States who are rated at from \$10,000 to \$20,000! Five hundred plumbers out of 22,000! For the various directories and lists give 22,000 names of master plumbers, so-called, self-called, or actual."—Domestic Engineering.

Every association should be represented at the National Convention in June. Appoint delegates early so that they will have a chance to make the necessary arrangements.



OFFICIAL NEWS of THE N.A.M.P. & S.F. of CANADA



Attendance at Convention Will be Large

**Indications Point to a Big Representation From all Parts—
Ontario Delegates May Assemble at Toronto and Travel in a
Body—Notes From Other Centres.**

Toronto, May 13.—President Cooper, of the National Association has been advocating a plan which appeals very strongly to those who are intending to go to the convention at Port Arthur and Fort William. He proposes that all who are going from Ontario and as far east as Montreal, should assemble at Toronto and start from here in a body. It is almost certain that most of the delegates will take the boat trip. The idea of a dusty journey by rail does not appeal at all when contrasted with a voyage by boat through the Great Lakes. Whether the Toronto party will go via Sarnia or Owen Sound has not yet been decided but, in any case, the Ontario delegates could assemble at Toronto and travel on the same train to the starting point for the water trip. If this plan were followed, there would be enough in the party to occupy one coach.

"We drape the coach with bunting and a big banner," declare President Cooper, "and let them know all along the road who we were, where we were going and what we were going for. Then the delegates would get a chance to get to know each other on the trip and by the time we reached the Twin Cities everyone would be ready to settle down to business."

The idea has "caught on" and it is highly probable that it will be acted upon. It would not be out of the way for any Ontario delegates to go to Toronto first and travel with the party.

Meeting of Executive.

A meeting of the executive committee of the National Association was to have been held on Wednesday of this week but it was postponed until Monday afternoon, owing to the inability of a number of the members to attend. Matters connected with the convention will be taken up.

President Cooper has issued a general notice to the effect that all reports and

resolutions to be introduced must be sent in by June 5.

A Big Delegation.

It seems practically certain that there will be a large representation present from Toronto. Just how many will go cannot be said just at present but it is quite possible that a dozen members will go. Among those who have announced their intention of going, unless something unexpected happens are Geo. H. Cooper, president, Lewis Le Grow, secretary of the National Association, R. J. Shannon, president of the Ontario Society and Ontario vice-president of the National, Wm. Mansell, John Wright and Frank Maxwell.

ONTARIO TREASURER.

J. Eggett who was elected treasurer of the newly organized Ontario Society of Sanitary and Heating Engineers at



J. EGGETT, London,
Treasurer of the Ontario Society of
Sanitary and Heating Engineers.

the meeting held in Toronto on Good Friday, hails from London, Ontario. Although the Forest City is not now what one would call a good association city, inasmuch as there is no local organization there, Mr. Eggett believes in association work thoroughly himself. With so strong an advocate of organized effort on the ground, it is quite possible that the trade in London will soon have a flourishing local association of its own. Mr. Eggett took an active part in the discussions at the Good Friday meeting and showed that he has a keen grasp of current problems and topics. His selection for the office of treasurer was a popular one.

The Eggett Co. was formed a year ago in London to take over the business of the Smith Plumbing Co. The members are J. Eggett, H. S. Laughton and H. J. Widden. They are carrying on a large business at the present time.

A STRONG DELEGATION.

Ottawa, May 12.—It is now certain that there will be a strong delegation from this city going to the National Convention. Present indications point to seven or eight and, although some of those now named, may have to stay at home when the time comes, it is practically certain that the majority will be on hand.

QUEBEC TO ORGANIZE.

Indications are that Montreal will send along a good body of delegates. In a letter to the editor of Plumber and Steamfitter, vice-president J. E. Walsh states that the local association will appoint delegates at the next meeting.

It is asserted that steps will be taken in Quebec this year to organize a provincial association on a strong basis. The example set by Ontario, in fact, has aroused the trade in all parts of the country and it is highly probable that similar action will be taken in a number of provinces. Quebec can be depended upon as one of the next to fall into line.

Business System Employed by Progressive Plumbers

T. A. Cowan & Co., Brantford, Have Adopted Ideas to Keep Track of Time and Material and to Classify all Orders—A Prospect System is Worked to Advantage—Estimate Sheets are Used and Filed Away.

IT is pretty generally acknowledged the average master plumber is that the chief fault to be found with he attends to business details carelessly. He is long on practical knowledge, but short on system. Only too frequently his lack of management allows the profits he makes on his work to drift away through leakages. Now this is doubly unfortunate, inasmuch as the plumbing business really demands very careful handling and painstaking system.

There are exceptions to every rule, and T. A. Cowan & Co., Brantford, are bright exceptions in this connection. They have a business system which seems complete in nearly every respect. It covers every detail and enables the firm to keep close tab on stock and time. They originated many of the ideas in use, and are finding that they get full satisfaction.

The business end is left in the hands of Cyril Henderson, a bright young business man, who was largely responsible for many of the ideas adopted. Mr. Cowan himself superintends the outside work, and handles the practical end generally.

Keeping Track of Stock.

Their system provides, in the first place, for looking after all stock. Before starting out, each workman obtains from W. Pilling, the stock keeper, the material required. He has to make out a requisition sheet, filling in everything taken, which he signs and hands back to the stockkeeper. If any material is brought back after the work is done, it

is credited on the requisition sheet. The sheet is then sent up to the office. It is not possible, therefore, to lose any

REQUISITION SHEET

N. B.—Workmen must fill out and sign one of these slips for all material required.

T. A. COWAN Brantford,..... 19

TO STOCK-KEEPER:—Please furnish the following

for.....work

At

.....

.....

.....

All Material Taken out is Entered on a Requisition Sheet.

material or to neglect to charge up the proper amount, except in case of negligence.

Time Books Kept.

Each man in the employ of the company has a time book of his own, which

tract and job are then taken from the time books and the requisition sheets, and entered on contract sheets, which are afterwards used in reckoning up the contract price.

Sale Slips Used.

All sales of goods made in the shop are entered on duplicate slips, one of which is retained, and the other handed to the purchaser. Borrowed material is kept track of in the same way. If another firm borrow some tools, they are given a sale slip, and a similar slip is retained. If the tools or materials are not returned, the firm which borrowed them receive a bill for the same.

In passing, it might be remarked that this would be a good idea for all master plumbers to take up. The ubiquitous borrower is one of the pests of the trade. He is found everywhere, and nothing is too good for him to ask the loan of. The writer knows of cases where smoke testing machines even have been borrowed and never returned. The borrower's persistency is only exceeded by his forgetfulness. He seldom or

PROSPECT CARD

T. A. COWAN

Date.....

Name.....

Address

Inquired for

Quoted

Will call.....

See them [See them](#)

Prospects

Employee

Card Used by T. A. Cowan for Keeping Track of Prospects.

never returns the goods and tools which he secured from his easy-going competitor. Is there any master plumber in business to-day who has not been bitten time and again by the loan fiend?

Estimate Sheets Used.

In order to escape losses in figuring, estimate sheets are used, both for heating and plumbing work. Copies of the sheets used are reproduced herewith. It will be seen that they cover the ground pretty thoroughly. All estimates and tenders are filed away where they can be used for future reference.

It is surprising how useful these old tenders and estimates will sometimes prove. Mr. Cowan informs the writer that he was called upon a short time ago to carry out a contract in a Brantford home. He recollected having done the same work in the same house a good many years before, and he hunted up the tender then put in. To his surprise he found that the old figure applied to the new contract as well. Although some things had become more expensive, there were reductions in other lines to counterbalance this, and he did the work for the same figure. What is more, he found the job a profitable one.

System of Bookkeeping.

A loose leaf ledger is used, with a card index. Mr. Henderson attends to the bookkeeping.

To assist in the office work, and to avoid the tangles in order work which are bound to arise unless all contingencies are provided for, a number of "office kinks" have been put into use. For instance, on the wall are a number of hooks for the filing of orders. Over each file is a label, indicating the nature of the orders on that file. One file is labeled "Rush," another "Soon," a third "Deliver," and a fourth, "No hurry." As each order comes in, it is filed according to this classification. All "rush" and "soon" orders are given immediate attention. It is not possible, under this system, to forget an order of an urgent nature.

Another good idea is found in the pasting of cost slips on the wall. The cost price is marked in cypher, and the retail price is marked with red ink. As the telephone is close at hand, a quotation can be given on any article at almost a moment's notice.

Collecting System.

Collecting is done almost entirely by mail. Accounts are sent out each month regularly. If any bills run too long, a personal call is made. A poor pay customer is never allowed to forget the fact that he owes T. A. Cowan & Co. a bill; and, ultimately, he is almost certain to pay up.

A Canvassing System.

One of the best features of all is the way that prospective customers are can-

PLUMBING ESTIMATE

BRANTFORD 190

For Mr.

No.

Street

Closet complete

Bath, complete ft. quality

Lavatory complete

Sink and Brackets

Division

Laundry Tub complete with

Cocks

Gallon

Range Boiler complete

No

Gas Heater

No

Pump

No

Water Lift

Soft Water Tank lined with lb. Lead.

Ft. 4" Sewer

Extra Digging

Ft. Water Service

Fees

Ft. inch Soil Pipe, Extra Heavy

Ft. inch Soil Pipe, Medium

4 x 4 Y X.H.

4" Bend X.H.

4" Cleaning Screw

4 x 4 TY X.H.

4 x 2 Y X.H.

4 x Vent Fitting

4 x Offset X.H.

4 x Offset Med.

2" Bend X.H.

2" Y X.H.

Flashing

Lead, Oakum and Gasoline

4" Lead Bend

4" Brass Ferrule

2" Brass Ferrule

1½" P Trap

S Trap

Ft. 1½" Lead Waste Pipe

Ft. 1½" Lead Waste Pipe

Ft. 2" " " "

Ft. 1½" Lead Vent Pipe

Ft. 1½" Lead Vent Pipe

Ft. 2" " " "

Ft. 1½" Iron Vent Pipe

Ft. 1½" Iron Vent Pipe

Ft. 2" " " "

Ft. 1½" Soldering Nipples

2" Soldering Nipples

Vent Spud

1½" " " "

Fittings for Vent Pipe

inch Mercury Vent

Ft. ½ x 6 Lead Pipe

Ft. " " "

Ft. " " "

Ft. " " "

Ft. " " "

Ft. 1" Galvanized Pipe

Ft. ¾" Galvanized Pipe

Ft. ½" " " "

Galvanized Fittings

¾" Stop Cocks

¾" Stop Cocks

inch Sink Cocks

inch Sediment Cock

Service Cock

Stop and Waste Cock

Hose Cocks

Connections to Range

Connections to Gas Heater

Solder Tags, Screws, Etc.

Cartage and Peppermint

Expense and Incidentals

Carpenter Work

Time

COST ..

TENDER ..

vassed. The firm believe in keeping track of all prospects, and have worked out a good system with that end in view. Printed prospect cards are used. When a person enters the store and shows an interest in some article, but leaves without purchasing, the name is promptly entered up on a prospect card, with all available information, such as name and address, the article inquired for, the price quoted, and the name of the one who waited upon them. If nothing further is heard, a call is made at the home and another effort made to create a buying interest in that particular article.

The same applies to contract work. If any employe hears of a man who is thinking of renovating his heating sys-

tem, or of putting in new plumbing, he promptly puts in the prospect, and a call is made.

The system works particularly well in cases where a person calls at the store, gets prices, and then goes to other plumbing establishments to get their quotations. The householder who follows this plan seldom makes a decision until he has taken the figures home and looked them over. Before he has time to make up his mind, a representative of T. A. Cowan & Co. calls to see him, with a new line of arguments and facts to present. The natural result is that a great deal of work is secured in that way.

One man, Walter Butler, is employed almost entirely in the capacity of out-

side canvasser. He also does a little collecting when occasion arises.

It Works Satisfactorily.

This prospect system has achieved really splendid results. Recently a lady had occasion to call at the store, and while there, she became interested in a water heater. The usefulness of the article appealed to her at once, and she wanted to buy it, but did not feel like doing so until she had consulted her husband. After she had left, the outside man was sent to call on the husband and with little difficulty secured the order.

A Handsome Store.

The showroom of this progressive firm is certainly one of the most handsome and commodious in the country, and Plumber and Steamfitter hopes at some time in the near future to present a description and views of the same. Among other new ideas, it contains a number of elaborately fitted up model bathrooms.

HEATING ESTIMATE

BRANTFORD

190

For Mr. _____ No _____ Street _____

CONSTRUCTION OF HOUSE _____

APARTMENT	CUBIC FEET SPACE	SQ. FT. WALL EXPOSED	SQ. FT. GLASS	SIZE RAD.	SQUARE FT.
No. Sq. Ft. Sq. Ft. Sq. Ft. Valves Valves Valves Air Vents Ft. Pipe Ft. Pipe Ft. Pipe Ft. Pipe Ft. Pipe Expansion Tank and Pipe Fittings Hangers Floor and Ceiling Plates Draw-off and Feed Cocks, and Water Supply Smoke Pipe Painting Covering Pipes Covering Boiler Freight and Cartage Expense, and Incidentals Time Boiler Radiation Radiation Radiation					
COST.....					
TENDER.....					

Copy of Heating Estimate Sheet Used by T. A. Cowan.

RE COLD WATER TUBE IN BOILER.

The 30 gal. boiler is 5 ft. in height and sometimes it is on a stand and sometimes on the floor. Then again it is placed in the bath room or in the kitchen attached to the stove or in the basement attached to a hot water boiler or jacket heater. Rule.—Never cut the tube shorter than 6" below the hot water feed in the side of the boiler and never longer than 4" over all. A little judgment will enable the mechanic to correctly cut the tube. Re Siphon.—On the top end of the tube file a slot nearly through and drive a sharp punch through the balance of the metal and you need never fear any more danger from siphonage.

Re 45° measurements.—Some time ago you gave an item how to get measurements of 45° by square. Now it is a well known fact that neither the plumber nor fitter carries one. For the benefit of the trade I give my rule. It has proved correct for 28 years. Take the distance on a straight line, x by 1.42. It is easier than hunting a square. Ex., 12" x 1.42 equal 17.04.

Yours truly,

C. F. GRIEVE.

A library building is among the possibilities at Moose Jaw, Sask.

The building site for the new post office to be erected at Nelson, B.C., at a cost of \$75,000, has been cleared.

A new \$100,000 court house is to be erected at Nelson, B.C., this summer.

An addition is to be erected at the Mutchmore Street school, Ottawa.

Plans have been prepared for the proposed gymnasium in connection with the Collegiate Institute, at Renfrew, Ont. The estimated cost is \$10,000.



The Question Box



Subscribers are Urged to Send Questions to be Answered, or to Comment on Letters Published. Descriptions of Jobs Done or Shop Kinks are Also Invited.

RANGE BOILER POUNDS — ALSO ROILY WATER.

Editor Plumber and Steamfitter. — I am sending you a sketch of a job that does not give satisfaction at all, as the water is not clear, and, at times, there is a pounding when the fire is too hot. I pulled out the cold water feeder pipe and found it about the length as I have shown in the sketch. Will you be kind enough to give me some advice in an early issue of your paper?

"Boilers."

Montreal, May 1.

We have had the sketch reproduced, and it appears as shown, and numbered by the figures, "1, 2, 3 and 4." In a previous number, we called attention to the cold water tube in the range boiler. Compare the length of these two, as shown in the drawings, and numbered "1" and "8" respectively. There should be a small hole made in the tube at about the point shown by the arrow, which is marked "10." Now suppose that, in course of time, this hole becomes stopped up? Suppose that the range boiler in figure one should be siphoned? The water front in that job would be nearly or quite drained, which would not happen to the

job, as shown in the second figure, because the cold water tube is from two to four inches higher than the top of the water front.

In the first figure, the pipes "2" and "3," leading from water front "4"

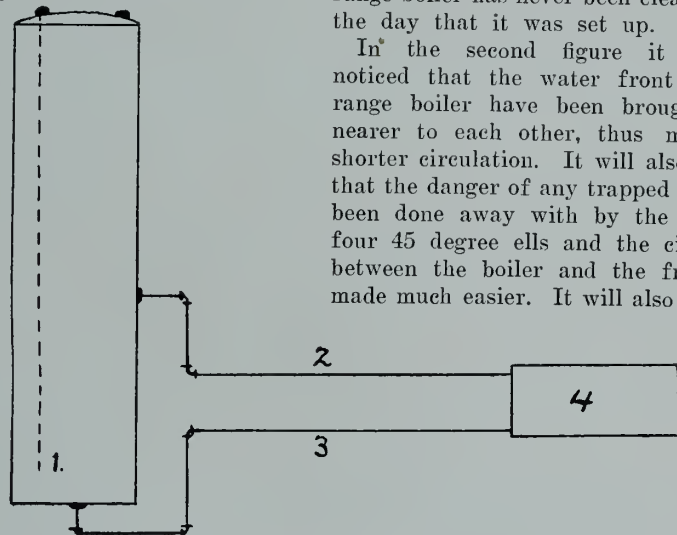


Figure 1.—Showing Correspondent's Manner of Connecting.

to the range boiler, might, either one of them, be trapped. The water front is shown at a considerable distance from the range boiler, and the distance should

be made less, if it is possible to do so. At the bottom of the range boiler no draw off has been placed, consequently we do not wonder that there is some roily water, as we suppose that the range boiler has never been cleaned since the day that it was set up.

In the second figure it will be noticed that the water front and the range boiler have been brought much nearer to each other, thus making a shorter circulation. It will also be seen that the danger of any trapped pipes has been done away with by the using of four 45 degree ells and the circulation between the boiler and the front thus made much easier. It will also be notice-

ed that the pipe at the bottom of the hook up in the second figure has been extended by using a tee, and at point "9" the cock for the purpose of emptying the range boiler may be seen.

If regular boiler couplings are not used on the job, the unions between the water front and boiler may be located at the points shown by the figures "6" and "7."

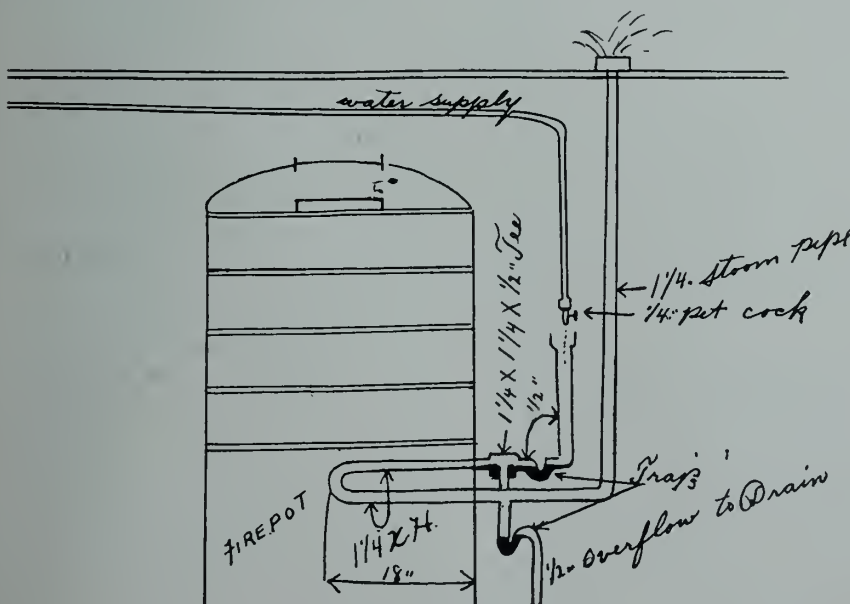
This should make a good looking job and one that will work well, giving as good satisfaction as may be for the class of work that it illustrates, but would be better for the addition of a circulating pipe, which we may show at some other time and number.—D.C.H.

WANTS A TIP ON DRAWING.

Editor Plumber and Steamfitter.—In the questions and answers will you be kind enough to give me a few points on drawing that would be of some assistance to the plumber?

"Drawing."

Toronto, May 2.



Sketch of Defective System.

(See Next Page).

That we will, and we are glad to see that some in the business are at last waking up to the fact that the plumber of to-day needs to know something about this muchly neglected, but not at all difficult, art.

We can not do better than to call attention to the drawings that are published in this department, and that refer to the connections between the water front and the range boiler. These could not be called beautiful. They were not gotten out for that purpose, but were drawn for the purpose of making clear the idea in the case. The party that drew them tried, specifically, to see how

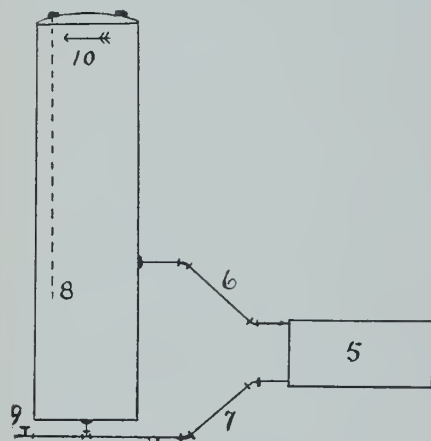


Figure 2.—Showing a Better Method of Connecting.

much he could leave out, and still give the right idea and enough of it. You can catch the idea of pipe lines very clearly, and also the tees and ells. In the place of putting in the unions on the second drawing, he has merely suggested that they could be put on at points "6" and "7." Now you can take out your pencil and paper and you can copy the drawing of the range boiler and the water front and the manner in which they are connected. Then the next time that you want to show any point along this line to a customer, you can make a fair attempt, if you have practised for several times. The drawings in this department are going to be very simple, for awhile, but they will show the idea meant, and it will pay you to follow up the ideas here shown, and you will find that the drawing necessary to show up most any common matter in the craft can be done by the average plumber quite neatly and without much fuss, and if he does not catch on, it is entirely all his own fault, and because he is what many people claim, actually lazy. Make pencil drawings for a while. You wouldn't have pen and ink with you out on the job anyhow, and you can practice with ink in the office or at home later on.—D.C.H.

TOO MUCH STEAM.

Editor Plumber and Steamfitter. — I recently installed a hot water job, and the owner had me hang a ceiling radiator, case it in and bring a fresh air duct from out doors to register in main hall. He then wanted something to allow steam to escape into the hall to make the air more moist. As shown in the sketch, the job works well at times when the fire is hot or is burning low. We find, however, that when a fresh fire is started, too much steam escapes. Notice the pet cock which is regulated to drop about every two seconds, so as to allow the water to turn to steam. Notice the half-inch overflow has running thread with tee, so as to barely make a water line in the coil. Trusting some reader may give me a hint as to how to overcome the difficulty, I remain,

"Too Much Steam,"

Oshawa, April 20.

We should not regard this as a sanitary job, in case that the overflow to drain is connected to same directly. In such a case there would be only the water in the trap to prevent the sewer odors from coming into the building, unless the water was turned on all the time for the summer, when the furnace was out of commission—a very improbable conclusion. The correspondent states that when the fire is fresh, the job gives off too much steam. What would be the matter with just spreading a newspaper over the contraption (as shown it resembles a basin) used on the floor at the end of the rising pipe that delivers the steam to the hall. When the fire cools, pull off the paper; or use a board instead of the paper. Any extra condensation would be passed off through the trap that leads to the drain pipe.

A much better idea than this would have been to have had a small copper lined open top tank and into this tank put a small coil. Heat the coil by a coil in the boiler connecting same by suitably sized pipes. Omit the connection to the drain. It is not a sanitary idea, as it is many times connected, and, in this case, it looks to us as though there was a fair chance for the sewer air to get into the house, if the conditions are as we have assumed.—D.C.H.

WHY WARM AIR HEATING IS OFTEN CONDEMNED.

In a certain two-storey school, which is being built in Eastern Ontario, the committee have let the contract for the building and heating of this school to a contractor, who has sublet the heating contract to a tinsmith. The tinsmith must instal a furnace in the way specified, and according to specified size (which will never give satisfaction).

The school has a capacity of 60 M. cubic ft. They are to instal a certain make of furnace, which is estimated at only estimated at only 60 M. cu. ft. and to take the cold air from outside. This air is to be conduited along the ceiling of the basement and down to the lower casing of the heater. Each room is to have at least two lots of air pipes. The ventilation is to be by one flue from the basement up. This flue is to have an opening at the floor line in both rooms to the same flue (which is entirely wrong).

This system will not heat the building nor will it ventilate the school properly. This is a very important feature. If inspected by a health officer, these plans would undoubtedly be condemned.

The proper way to heat this building would be, I think, to have a good furnace of double the capacity of the building and to take all the cold air from the outside into the cold air rooms and then underground to the pit under the furnace. One large flue should be built into the wall to each room and emptied two-thirds up from the floor line into each room. The warm air flue to the ground floor room would also act as a vent flue. The ground floor would have to have a separate flue. The smoke flue should be between these vent flues. Each vent should have an opening in the floor line for venting each room in the winter time. Each room should also have a register with cords at the ceiling line in order to vent the rooms in summer. These registers should always be closed in winter time.

Is it any wonder that half of the children in this country are unhealthy. The writer should like to hear the views of others on the problem of improving the heating and ventilating of schools.

HEATING ENGINEER.

The health department, Edmonton, will erect a nurses' home at a cost of \$5,000.

Tenders are being called by the Edmonton Exhibition Association for erection of the new \$100,000 stock pavilion on the Exhibition grounds.

Additions are to be made to the hospital at Galt, Ont., to cost \$25,000.

The proposed infectious hospital at Guelph, Ont., will cost \$15,000.

The Barton Street Baptist congregation, Hamilton, Ont., have acquired the corner of Cannon and Sherman Streets and will build there.

The Hull, Que., public school commissioners have decided to erect a large kindergarten school there this summer at the rear of Notre Dame College.

A new M.A.A. clubhouse is to be erected in Westmount, Montreal.

Two wings are to be added to Cedar Cottage school, South Vancouver, at a cost of about \$40,000.

How Large Tinshop Department is Handled

Howie & Feely, Brantford, Employ Twenty-five Men all the Year Round—Stock is Kept Under Lock and Key—Each Man Fills Out a Daily Time Card—A "Call" Book Used.

The management of the tinshop is a problem which worries many a plumber. They find it difficult to keep accurate account of material and time. During slack seasons, the department becomes a serious drag on the business. Tools, ladders, etc., are left around and speedily disappear. Other causes contribute to the worries which are met with in the conduct of a tinshop and help to create the losses so often experienced.

The remedy lies in the adoption of a rigid system of checking up time and material and in canvassing for business to keep the department going through the seasons of the year, which are bound otherwise to be slack. If no effort is made to stimulate business during the winter months the proprietor will soon find that he is getting little in the way of returns for the salaries that he must continue to pay. It becomes a case of "all going out and nothing coming in."

Few tinshops can boast of as complete and satisfactory system of management as that adopted by Howie & Feely, of Brantford. This firm have an extensive business and employ about twenty-five men in the tinshop all the year round. They are fortunately situated to do tinning work, as Brantford is a big industrial centre. A large share of the factory work goes to Howie & Feely, and, as this is not confined to any season, they run full-handed right along. In fact, during the past winter they increased their staff.

This business was worked up by paying attention to factory needs and keeping closely in touch with the manufacturers. The firm are now in a position to carry out thoroughly and expeditiously any variety of tin work required in an industrial plant.

Checking of Material.

It is quite apparent that, with such a large connection, the necessity has been felt for some system to keep track of the stock. The plan followed is to have everything kept in charge by a stockkeeper. Access to the supplies can be had only through application to him. He keeps it under lock and key. On starting out in the morning, each employee goes to the stockkeeper and gives a list of what he will require. He has to sign for this. If he brings anything back to the shop, he hands it over to the stockkeeper and receives credit for same. The stock used is then made up and charged to the job on which the man was engaged. If fresh supplies are needed, the men on the job cannot go back to the shop and take what they need. They have to secure the material in the same way.

All the supplies used on any contract are then entered up and charged.

The stockkeeper looks after tools and ladders in pretty much the same way. When a ladder is taken out for use at a certain house, the fact is entered in a "call" book. When the men report that they have finished the work, the rig is sent to get the ladder, tools and whatever material is left over. By consulting this book, it is possible to find where all tools and ladders are and it is practically impossible to lose track of anything of that description.

Time Cards Used.

With such a large staff, a thorough time-checking system is necessary. Each man on starting out in the morning is supplied with a card, which he is required to fill out. As each hour is divided into quarters, it is possible to tell almost to a minute how much time was spent on each job done during the day.

TIME CARD

HOWIE & FEELY

Name	Date	191
7	1	
8	2	
9	3	
10	4	
11	5	
12	6	

Time Card Divided Into Quarter Hours Which Each Employee Must Fill in Every Day.

The men sign their cards at night and turn them in to Mr. Feely, who is in charge of the department. The time and the material are taken from these records and charged against each job.

Stay at Factory.

So much work is done at one Brantford factory that the firm keep two of their men there practically all the time. These men report at the shop first thing in the morning, secure the material they will require during the day, sign for it, get time cards and then repair to the factory. At night they call back, hand in their cards and report progress to the head of the department. Generally, also, they indicate about what they will need to have the next day. The bulk of the work done in the factories is in putting up "blowers," guards, etc.

Howie & Feely have found the system outlined above very satisfactory in every way. They are able to keep track of every foot of pipe and to account for each minute of the day of each employee. They experience no losses in either respect.

Study the Advertising of Others in the Trade

Good Ideas Can be Gained by Watching What Others Are Doing — Individuality Should be, However, the Quality Aimed At.

In advertising one can learn a great deal from studying the styles adopted by other men. Individuality and distinctiveness are qualities above all others that a man should aim to cultivate. The best ad. is the one which stands out by reason of the fact that it is different from all others. At the same time, a man can, even in the pursuit of originality, gain much by studying the efforts

of other men. This is particularly true with reference to men in the same line of business. The master plumber in Vancouver can get valuable pointers on advertising by studying what plumbers in Toronto, say, are doing.

A number of plumbing advertisements are herewith produced. It is interesting to note the wide divergence in style, in thought and in phraseology. It is also

interesting to note that many of the plumbers, whose efforts in the advertising line are shown, are handling side lines and believe, apparently, in pushing them.

Take Henry Boettger, of Rosthern, Sask., for instance. He does heating, lighting, tinsmithing, plumbing and gas-fitting, sells gas fixtures and caters some to the automobile trade. With such a range of trade, it is safe to assume that he is kept tolerably busy. This ad. is well laid out and it shows the wide scope of the business. The border is of an antiquated pattern but otherwise the typographical work is commendable.

Heating, Lighting and Tinsmithing

I wish to make it known to the people of Rosthern and vicinity that I am now prepared to handle any work left with me in these lines.

Special attention given to Plumbing and Gas Fitting.

Gas Fixtures for sale.

All sizes of Carbide for automobiles and private plants for sale.

Moderate prices and prompt attention to all orders.

HENRY BOETTGER
Ens Street, Rosthern, Sask.



Prepared Paints.

We sell Jamieson guaranteed pure prepared paint at 1.50 per gal. which we bought before the recent advance in price.

Garden Tools.

We keep a full assortment of Spades, Shovels, Rakes, also Wire Netting of all sizes. Get the prices

Should You Require
**Plumbing,
Heating**

or

Electric Wiring

in your home we will be pleased to furnish you with estimates for same.



CONRAD BROS.,
King St. - Waterloo

B. KAUFMAN Practical Plumber and Tinsmith

will carry a full stock of Plumbing and Sheet Metal Supplies.

Estimates freely given as to cost on Plumbing and Sheet Metal Work. Steam, Hot Water and Hot Air Heating a specialty.

Your patronage solicited. Satisfaction guaranteed.

B. KAUFMAN

Residence and Temporary Workshop:
Tronson Street, next Salvation Army.

LOOK!

Twenty-eight years of practical experience in Sanitary Plumbing, Steam, Hot Water and Gasfitting is at your service.

Ring us up—Phone B7S, or call.

HASWELL & WEAR

Sanitary Engineers
24 Main St.

Plumbing and Heating

When visitors come isn't it gratifying to have your bath room equipped that it may win the approving glance of every critical eye? Our enameled fixtures make your bathroom modern and a room to be admired. When you place your plumbing work with us you are assured of high grade work and prompt service

Hamilton & Stott,
Plumbers.

J. P. McMurphy
Plumbing and Heating
Telephone 730.
Colonial Block, Clarkson Street.

We attend to your

PLUMBING

promptly and well.

B. C. Plumbing & Heating Co.
Victoria Street, near Opera House
Telephone 181

MAHONY & KENNEDY

HEATING and
PLUMBING

Machine Pipe Threading
Sheet Metal Work

Phone 100. Clarkson St
Near of City Hall.

A HOT FIRE!

A Cool Kitchen

Just the heat you want, when you want it.

PERFECT CONTROL.
ABSOLUTE SAFETY.

Economy and simplicity distinguish the dependable.

FLORENCE AUTOMATIC

Blue Flame Oil Stoves

Call and see it.
NO WICKS. NO VALVES

SOLD ONLY BY
A. HALL & SON,
THE PLUMBERS.

Conrad Bros., Waterloo, Ont., also believe in carrying more lines than one, as their ad. testifies. They show, however, that they justly estimate the comparative value of the various lines by putting the most important—plumbing, of course—first of all. The ad. is well laid out but the illustrations, the bottom one particularly, are not just as catchy and attractive as they might be. The intermingling of several different styles of type detracts some from the appearance.

Then take the advertisement of A. Hall & Son. The central idea is the sale of oil stoves—a very seasonable line at the present time. It is a safe wager that A. Hall & Son will sell a lot of oil stoves and make a neat profit, because people are buying oil stoves now for use in summer cottages, etc. It is a good opportunity; and yet how many plumbers are handling oil stoves? Little can be said, however, in favor of the ad. as it stands. This is not the fault of the writer but can be laid at the door of the ingenious printer who set the matter up. The pains he has taken to in-

troduce any number of odd styles of type is really astonishing, and the effect is far from pleasing.

Of the others shown several are mere cards. In this class can be placed J. P. McMurphy, New Westminster, the B.C. Plumbing and Heating Co., Nelson B.C., and Mahoney & Kennedy, of New Westminster. B. Kaufman, of Vernon, B.C., has something on a more elaborate scale. It is a straight business-like appeal and doubtless has proven effective as a trade getter.

Haswell & Wear, Kamloops, have a catchy ad., which tells its story concisely.

Hamilton & Stott, of St. Thomas, have adopted an argumentative strain and talk to the readers in a strain calculated to carry conviction. An improvement might be effected by putting on a different heading, such as "What you need," or something having a direct bearing on the reading matter which follows. This ad. is seriously detracted from, however, by the carelessness of the printing.

full range of knowledge required in the trade, at a minimum of expense.

If the idea is carried out successfully by the journeymen at the capital—and there is every reason to suppose that it will—other places might well consider taking it up.

Held Series of Lectures.

The Toronto Union adopted the plan during the winter, that has just passed, of having lectures once a month. The speakers selected were all men of authority and standing and the subjects chosen were invariably of a practical turn. Consequently, those who attended heard addresses of a highly educative and useful nature. It was gratifying to the committee in charge that the attendance at all the lectures was large. The number, in fact, kept increasing as the season advanced, showing that the interest grew as the value of the lectures became more and more apparent.

The day will doubtless come when classes in plumbing and general mechanical work will be held in every city and town for the benefit of members of the trade. Until that happy time arrives, it devolves on each man to instruct himself in the higher phases of sanitary and heating work. It is much better, however, when this is undertaken in concert with others and the importance, therefore, of such educative movements as have been started in Ottawa and Toronto, becomes apparent.

Plumbing is not limited to wiping joints and the other jobs which enter into a man's daily work. It involves a knowledge of physics, a fairly wide knowledge of scientific and mathematical laws, and some skill at mechanical drawing to boot. A rough idea of it all can be picked up in the round of practical work but it needs steady application to books to become thoroughly versed. Plumbing, while still a trade, has become more than that; it is almost a science. It provides not only for the comforts of modern conveniences of the home but safeguards health as well. Is it not, then, doubly important that the standard of those engaged in the work should be raised to the highest possible plane?

The good work begins with the journeyman. It does not stop there but goes on and includes the master plumber as well. All are included in the rule now generally accepted that the man who does sanitary and heating work must know his business from A to Z.

It has been decided to place a by-law before the people of Elora, Ont., to loan the Elora Furniture Company \$10,000 to erect a two-storey addition to their present factory.

Educative Movements are Started by Journeymen

**A Library of Technical Books to be Established at Ottawa—
A Series of Lectures Held in Toronto With Good Results—
The Necessity for Educative Work is Felt Now in all Parts of
the Trade.**

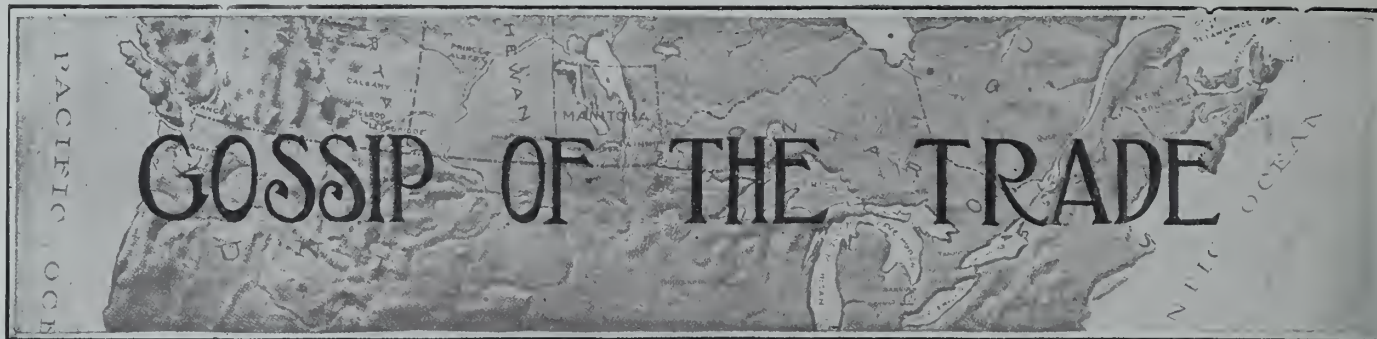
The journeyman of to-day is the master plumber of to-morrow. There is before every man in the trade the possibility of some day managing and owning a business of his own. To achieve this end, however, a man must be prepared to work hard, to learn his trade thoroughly, to master the problems of business management and become, in fact, well versed in all that pertains to plumbing. No man can do all that if he is content to perform his daily work, draw his weekly pay envelope and limit his activities there. By pursuing such a course, he may in time become a good journeyman—but absolutely nothing else. The theoretical and business sides cannot be approached through the daily routine of practical work. They can be mastered only by study and painstaking application **after hours**.

It is gratifying to note that the journeymen are, now-a-days, showing a keen interest in the question of their own advancement. A large percentage are striving to gain a deeper insight into the trade they are following—which, by the way, presents wide scope to the seeker after knowledge—and are picking information up fast on the more technical aspects. This augurs well for the future of the trade in Canada.

A progressive step is now contemplated by the journeymen of Ottawa. They are aiming, in fact, at the establishment of a union library. The intention is to purchase books dealing with technical subjects and business management and place them at the disposal of the members. It is believed that it will be possible to raise sufficient funds to stock up the library with all books of value bearing on such matters and to thus present to each member the opportunity to inform himself on all points.

Just how the idea will be worked out has not yet been decided but the Ottawa Union have a good reserve fund and will probably be able to finance it without seriously depleting their store. It is possible that some scheme such as the issuing of cards may be adopted; that, however, rests with the future.

The idea is, in many respects, a commendable one. Most journeymen, particularly the younger men, are not in a position to buy all the books they might desire, all the books they would require, in fact, if they intended to fit themselves to carry on a business of their own. The establishment of a library would place at each man's disposal, books covering the



A New Factory.

A new industry to produce cheap and efficient sewer pipe and paving block is reported at Fort William, Ont.

Leaving the Business.

W. H. Howell, Brantford, is going out of the business. He recently conducted a ten day clearance sale of his stock, disposing of the bulk of it in that time.

To Prepare Plans.

Architect Thos. Hepburn has been authorized to prepare plans for a new arrangement of steam heating, ventilating, etc., to cost \$2,300, for the Stratford, Ont., separate school.

Artistic Show Room.

L. C. Karstedt, has opened up a fine store on 2nd avenue east, Owen Sound, and has it artistically arranged with bathroom fittings of every description. He intends going extensively into the plumbing business.

Appointed on Committee.

At the last meeting of the Toronto Master Plumbers' Association, Frank Maxwell was appointed as representative of the trade on the new civic by-law committee. This committee will go into the question of remodeling the city by-laws.

Purchases Store.

Thos. Slean, who has purchased Geo. Ziller's store on Colborne street, Oakville, intends to divide it into two sections. He will occupy one for his plumbing business. Mr. Slean was recently of Toronto.

Broke His Arm.

Thos. Clarke, who formerly conducted a plumbing business near the Red Store, Sarnia, but who is now located in Toronto, had his right arm badly fractured on Friday last. Mr. Clarke was standing on a ladder, which broke and threw him to the ground.

New Factory Completed.

The Wallaceburg Brass and Iron Manufacturing Co., Wallaceburg, Ont., have completed their new factory and are now employing about eighty men. The building is of brick construction, 160 feet by 45 feet, and two storeys high. It has been occupied since the latter part of March. With the added capacity thus acquired, the company are

manufacturing a complete line of brass supplies, and have largely increased their output.

Get an Increase.

The members of the plumbers' union, Hamilton, have been given an increase of 2½ cents an hour. The Times says: Harmony exists between most of the employers and their men, and the good feeling allowed negotiations to come to a successful issue.

Goes to Camrose.

J. Houston has taken a position in the plumbing and heating department of H. W. Storey's hardware store, Camrose, Alta. He just recently completed the installation of the plumbing and heating systems of the new parliament buildings at Regina, Sask.

Trying New Fountain.

The medical health officer of Guelph is much opposed to public drinking cups. He recently brought the matter up at a meeting of the board of health, and it was decided to place a sanitary drinking fountain in some convenient place in the city and give it a trial.

Secure Contracts.

The electrical, plumbing and heating firm of George E. B. Grinyer & Co., Guelph, have secured the contracts for the installation of the plumbing and heating systems in the post offices at Fergus and Elora.

Joins Western Firm.

Mr. Archibald, formerly with the Sherwin-Williams Co., was in Toronto last week on his way to Saskatoon, where he is taking a position with the Enterprise Hardware Co., dealers in hardware and plumbers' supplies. Stanley Emerson is leaving the Enterprise Co., and will go back with the Emerson, Fisher Co., St. John, N. B.

They Want Inspection.

The city council of London is considering the question of appointing a plumbing and electrical inspector. The matter is in the hands of a committee and will likely be decided very shortly. The request for a plumbing inspector came from the Plumbers' and Steamfitters' Union. They pointed out in their communication that there were many cases of bad plumbing in London,

and that it would be in the interests of the citizens generally if an inspector were appointed. It was proposed to finance the department by fees charged for services.

To Medicine Hat.

J. Harry Matthews who bought the tinsmithing business of L. Y. Birmie, Phoenix, B. C., some months ago, has decided to go to Medicine Hat, where he will become a partner with Mr. Birmie in a large hardware business. He will ship his hardware stock from Phoenix.

Threaten to Strike.

The master plumbers of London, Ont., have been served with notices stating that in one month, all the journeymen will go out on strike, unless they receive an increase in wages, which they are asking. There are about forty journeymen in the city, and they are asking 40 cents an hour. At present they receive 35 cents an hour.

Was Given Brushes.

James R. Carruth recently left Renfrew, Ont., to take a position with a plumbing firm in Calgary. In St. Paul's church at the conclusion of the 11 o'clock service of the Sunday prior to his departure, he was presented with a set of military brushes and a prayer book by the choir, of which he had been a member for ten years. The congregation gave him a traveling bag, the pastor supplementing the gifts with warm words of appreciation.

Ottawa News.

A representative of The Plumber and Steamfitter attended the meeting of the plumbers' union of Ottawa. The Ottawa union is desirous of using the columns of Plumber and Steamfitter to promote the interests of the trade. J. Smith, formerly with McKinley & Northwood, has accepted a position as foreman of the M. M. O'Connell Co., Plumbing and Heating Engineers, Ottawa. Seivata Bros. are opening a new store at 246 Rideau street. Mr. Joe St. Marques, formerly of Montreal, is also on the staff of the M. M. O'Connell Co., Ottawa. The master plumbers and journeymen of Ottawa are planning a joint picnic, to be held Aug. 5, and are making extensive preparations for a gala day.

In New Quarters.

The National Plumbing Supply Co. are now fully installed in their new offices on Adelaide street. The showroom is not yet completed, but it is being rapidly put into shape.

Held a Conference.

Committees of the Toronto Master Plumbers' Association and the journeymen met on Wednesday last to talk over the proposed changes in the plumbing by-law. The council is considering the question of new legislation, and the plumbing interests will be represented on the by-law committee.

Some Contracts Let.

Among recent contracts let in different parts of the country are the following: Manville-Angus block, Prince Albert, tinsmithing, heating and plumbing to the Manville Hardware Co.; Blackburn building, Ottawa, ventilation and copper work to McFarlane & Douglas, heating and plumbing to M. M. O'Connell; Donald Fraser, stores and apartment house, Ottawa, plumbing to J. R. McLennan.

New Firms Start Up.

Two new firms are starting in Port Arthur, both composed of young men of that place. W. Phillips and C. Brennagh are going into the tinsmithing and furnace business. Mr. Phillips was for many years with the firm of Wells & Emerson, and Mr. Brennagh was with the Barnes Hardware Co. The other firm is that of McArthur & Titchburn, who will take up plumbing and heating. The two firms have leased the building of W. P. Cooke on Cooke street.

Back From the West.

L. L. Anthes of the Anthes Foundry Co., has returned from a trip through the Northwest. He went as far as Calgary and Edmonton, and visited all the more important points en route. He states that the West is showing signs of even more rapid growth than in the past, and that the plumbing and heating trades are enjoying a full share of the prosperity. In Calgary one builder alone has a contract for the erection of five hundred new houses.

Mr. Anthes states that the Western plumbers realize fully the benefits of organization, and are forming associations on a splendid basis. As a result, conditions in the trade are showing a big improvement. From all reports a large number of delegates will be sent from Western points to the National Association convention at Port Arthur and Fort William, although many who would otherwise have gone are now too busy.

While in Winnipeg, Mr. Anthes made arrangements for the establishment of a Western branch in that city. A site has been secured on Saskatchewan ave.,

and building operations may be commenced this year.

West is Prosperous.

W. H. Darling, Western representative of the Canadian Wolverine Co., has returned after his spring tour through the Western country. His territory extends from North Bay to the coast, so it will readily be seen that he has to cover a great deal of ground, and hasn't much time lying idle on his hands. Mr. Darling states that he found conditions everywhere to be exceptionally brisk. Business is better than ever before, and the Western plumber and steamfitter has all that he can handle just at present.

To Erect Warehouse.

The James Robertson Co. are calling for tenders for the erection of their new office and warehouse building at the corner of Spadina avenue and Sullivan street.

Difficulty Settled.

A little difficulty in St. Catharines between the master plumbers and the journeymen cropped up last week, but it was settled in a few hours. The journeymen, who number about 40, asked for an increase in wages from 30 cents to 35 cents an hour, and also that apprentices after serving four years at the trade be paid at the rate of 25 cents an hour, and an increase of 5 cents per hour for each year after that until the maximum wage is reached. Until now the apprentices have not been paid by the hour. At a meeting Saturday night the union was unable to reach a unit of opinion, and the men on Monday morning were not at work as usual, but before noon a decision was reached and the master plumbers were notified that the men would be on their respective jobs the next day. By the agreement which has been reached, the journeymen will receive 35 cents per hour—an increase of 5 cents—while four-year apprentices will receive 20 cents per hour. After five years they become eligible to the rate of journeymen. The agreement does not affect apprentices under four years of service.

News Briefs.

The Western Plumbing Co., Winnipeg, have dissolved.

John T. McCulley has started a plumbing business at Winnipeg.

W. J. Dawson has started a plumbing business at Blairmore, Alta.

D. H. Mahoney, Swift Current, Sask., has opened a plumbing establishment.

Stephen B. McMinnamin has opened a plumbing establishment at Fredericton, N. B., on Regent street. He has had large experience in the trade.

George Bergeon of Hermiston & Cormie's staff put in a system of steam traps

in the Capital brewery, Ottawa, for the Munday Company of New York City.

W. H. Wildeman has started a plumbing business at Calgary.

Geo. F. Venables, Hamiota, has gone to Strassburg, where he has secured a position as tinsmith.

Herbert Tiskey, who has been in J. F. Turnbull's tinsmith shop at Fillmore, Sask., has gone to Winnipeg. The situation will be filled by Mr. Friese.

McKnight & Frost, Edmonton, have received the contract for the plumbing and heating of the courthouse at Edmonton.

The B. C. Plumbing Co. have received the contract for the plumbing in the new Kerr block, Nelson, B. C.

AMALGAMATION OF BRASS FIRMS

In last week's Ontario Gazette, there appeared a notice of the incorporation of the United Brass and Lead Co., capitalized at \$500,000, with head office in Toronto.

This new company represents the amalgamation of two firms, the General Brass Co., and Somerville, Limited, both of whom have operated brass foundries in Toronto for some years past.

It is understood that certain financial interests which were involved in both concerns, are responsible for the deal. Both plants were turning out a similar product, and operating the same class of machines, so that they were in constant competition with each other. To prevent this duplication and competition, the interests referred to succeeded in effecting a consolidation of the two plants under the name of United Brass & Lead Co.

The new amalgamation will operate the plant of Somerville, Limited, and the works of the General Brass Co. will be abandoned. Fred Somerville has been chosen general manager of the company and Lorne Somerville, secretary-treasurer. Murray Woodbridge, formerly manager of the General Brass Co., is superintendent of the consolidated plants.

F. W. Burns will erect a commercial building at the corner of Bronson and Somerset Streets, Ottawa.

Hiram Robinson, Ottawa, has decided to erect a four-storey building on Queen Street instead of two storeys, as at first proposed. The building has about 100 feet frontage and will cost about \$50,000.

Mayor Holmes is considering the erection of a 3-storey block at Prince Albert, Sask., to cost about \$25,000.

A two-storey market building is planned at Port Arthur, Ont. The estimated cost is \$12,000.

PLUMBING AND HEATING MARKETS

MONTREAL.

Montreal, May 13.—Asked as to how he found the demand for general plumbing lines, the head of one of the city's big supply houses replied, that business was picking up very favorably and in all departments a satisfactory demand was felt. The very extensive building operations in the city and surrounding country are having a good effect on the plumbing trade. From a cursory enquiry it appears that activity is quite general and employment is more than sufficient. The present demand covers all the principal lines.

Boilers and Radiators.—The amount of business in heating lines is encouraging. Range boilers are in good demand and the general indications from the enquiry for radiators point to a specially busy year. They point to considerable building work throughout the country and to a continuation of the same.

Soil Pipe.—Among the lines that show good returns are soil pipe and fittings. It is still rather early for this work to assume its heaviest proportions and still further operations are looked forward to. Discounts quoted locally remained unchanged—medium and extra heavy pipe up to 6 in., 70 and 10; 7 and 8 in. pipe, 50 p.c.; light pipe 60 and 10; fittings, 70 and 10 p.c.

Iron Pipe and Fittings.—There is no change to the discount quotations. Trade is of a steady nature and is increasing in volume. Black iron pipe per 100 ft. on 1 in. basis is \$4.70 and galvanized \$6.35. Discounts on fittings are: Malleable fittings, 40; cast iron, 65; standard bushings, 70; headers, 60; flanged unions, 65; malleable bushings, 65; nipples, 75 and 10; malleable lipped unions, 65 p.c.

Solder.—There is a steady trade in solder but no particular change. King solder, 26c; strictly solder, 25c, commercial, 24c, and wiping, 22.

Lead Pipe.—Lead pipe is in good demand and is going out freely. Discounts are 30 p.c. on lead pipe and waste; 50 p.c. on trap and bends; caulking lead is quoted at $4\frac{3}{4}$ cents per lb.

TORONTO.

Toronto, May 12.—The advent of good weather has naturally affected conditions very appreciably and a brisk trade is now being done by all the supply houses and manufacturers. During the past ten days business has doubled itself in some quarters. Reports received tell of an unvarying degree of activity in the plumbing trade in all parts. Active conditions should continue right through the summer and fall, as building operations are on a larger scale than ever before.

Prices have remained very steady during the past fortnight. A little shading of prices has been done in some lines but nothing of a material nature has taken place.

Enamelware.—The demand for all varieties of enamelware has been heavy, rather heavier in fact than at the same season last year. Rapid progress is being made in the building line and this has led to activity in the demand for enamelware. No price changes have been made.

Boilers and Radiators.—In the last issue it was reported that, although plenty of orders were being received, business had been delayed by the cold weather. All this has been done away with now. Orders are being received in large number, many for immediate shipment, showing that building operations are now sufficiently advanced to permit the active commencement of heating work. A great many orders are also being received for future requirement and enquiries are reported to be heavy.

Soil Pipe.—There is now a heavy demand for soil pipe. Outside work is being rushed along. The discount generally quoted on heavy and medium soil pipe is 70 and 10, but it is understood that at least one firm is offering 70 and 10 and 5. A discount of 50 per cent. is still allowed on the 7 and 8 inch sizes. Some difficulty is reported in securing light soil pipe, but the demand is not very heavy.

Lead Pipe.—There is a good deal of business being done, prices remaining firm. Lead waste is quoted at 9c per lb., with a 30 per cent. discount. Caulking lead is quoted at $4\frac{1}{2}$ c. per lb.; traps and bends show a discount of 50 per cent.

Iron Pipe and Fittings.—The slackness reported in last issue is now not noticeable. In fact, it has been replaced by a good active demand. No price changes are made. Cast iron fittings are selling at a discount of from 65 to 70 per cent. Malleable fittings stand $37\frac{1}{2}$ to 40 per cent. Cast iron bushings are 70 and malleable run all the way from 65 to 70. Nipples remain firm at 75 and 10, but $67\frac{1}{2}$ is allowed by some firms on headers, while others still quote 60 and 10. Flanged unions stand at 70; malleable-lipped unions, 65 to $67\frac{1}{2}$ c.; galvanized pipe, \$6.18; black pipe, 1-inch size, \$4.54.

Solder.—The demand has become heavy. Prices are practically the same but a slightly higher tendency is noted in wiping, which is now quoted at 21c to 23c. Half-and-half is selling at 24c. and 25c.

Metals.—The quietness which has characterized the metal markets in general, for some weeks past, is still apparent, and buying continues in relatively

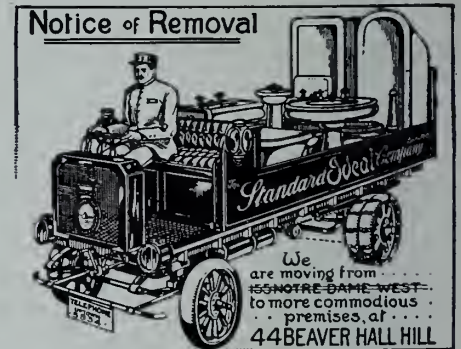
small volume. Construction is going on without abatement in every part of the country, and especially in the larger trade centres, but, although the consumption of metal consequent upon building operations is very large, this fact does not seem to lend a great deal of encouragement to buyers, who are specifying for immediate needs only.

Pig iron is in somewhat better demand this week, but the prevailing caution is shown in the small specifications which are being inquired for, or ordered forward. The largest inquiry reported locally is for one thousand tons, and, in the inactive state of the market, there is some strong bidding for this order.

Prices have declined, on both tin and copper, but otherwise the market shows no change. As a matter of fact, prices on metals are all considered very low, and allow but little margin of profit. As soon as the demand awakens, there is bound to be a series of advances.

MOVE TO LARGER QUARTERS.

The following unique card in the form of a folder has been sent out by the Standard Ideal Co. The picture tells in a concise way of the removal of the Montreal showrooms of the company to a new location.



McDougall-Jenkins Engineers, Limited, North Vancouver, have purchased the plant, including foundry equipment, patterns, etc., of the Albion Iron Works. They will erect another shop extending from the present building a distance of 250 feet and costing about \$150,000.

The Westinghouse Co. are to build a brick addition to the pattern and machine shop to cost \$65,000.

The Gordon Nail Co., formerly of St. John, N.B., will build a plant at Medicine Hat, to cost \$80,000.

A match factory is to be built at Port Arthur, at a cost of \$70,000.

The Buffalo Brake Beam Co. will locate their Canadian branch at St. Catharines.

Building operations will be commenced shortly on the new Queen's Hotel at Saskatoon, which is to cost \$200,000.

The Independent Tire Company are to erect a \$50,000 factory at Guelph.



OUR NEW BUILDING

If you are looking for satisfaction in
PLUMBING SUPPLIES

place your order with us.

We carry in stock in our new Warehouse a full line of Plumbing Fixtures, and will give you prompt delivery.

TRY US

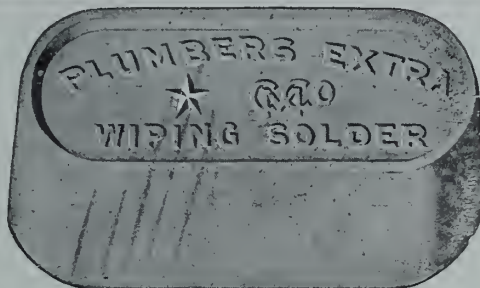
THE NATIONAL PLUMBING SUPPLY CO.
 115-117-119 ADELAIDE STREET WEST, TORONTO, ONT.

TO THINE OWN SELF BE TRUE,
 THOU CANST NOT THEN
 BE FALSE TO ANY MAN.

—Hamlet

We manufacture plumbers'
 lead supplies.

The keystone of our success,
best possible quality.



WRITE FOR PRICES

**STAR EXTRA
 WIPING**

Makes friends as the years
 go by.

It is true to its reputation
 for giving absolute satisfac-
 tion.

The Canada Metal Co., Ltd.,

- **Toronto**

CAST IRON FITTINGS

Being manufacturers of Cast Iron Fittings exclusively, we are naturally in a position to give quality the first place, which accounts for the high standard maintained.



That our fittings are being recognized by the trade as a standard is proven by our largely increased sales which have made the installation of additional machinery necessary.

Standard Fitting & Valve Co., Ltd. - Guelph, Ont.

To the Manufacturer or Wholesaler—

If it were possible to employ a traveller who could call on thousands of the best dealers all through Canada every week, what salary would you figure he'd be worth—even supposing he did nothing more than go in and shake hands with these dealers, under such circumstances they'd be glad to see him.

Would he be worth \$200, \$300 or \$500 per week? Many a house would pretty nearly let him fix his own salary.

Equip an advertisement in this paper with a verbal handshake for every dealer in Canada, and a frank, brief, pointed talk about your goods and you add a traveller to your staff who will make thousands of calls a week for you at a salary of \$4 to \$8 a week—less than you would pay a first-class stenographer.

Of course this traveller won't displace any of your regular salesmen, but he will help them to sell more goods and open up more new accounts.

Condensed or "Want" Ads.

MISCELLANEOUS.

ADDING TYPEWRITERS write, add or subtract in one operation. Elliott Fisher, Limited, Room 314, Stair Building, Toronto.

ACCURATE COST KEEPING IS EASY if you have a Dey Cost Keeper. It automatically records actual time spent on each operation down to the decimal fraction of an hour. Several operations of jobs can be recorded on one card. For small firms we recommend this as an excellent combination—employees' time register and cost keeper. Whether you employ a few or hundreds of hands, we can supply you with a machine suited to your requirements. Write for catalog. International Time Recording Company of Canada, Limited; office and factory, 29 Alice Street, Toronto.

COPELAND-CHATTERSON SYSTEMS—Short, simple. Adapted to all classes of business. Copeland-Chatterson-Crain, Ltd., Toronto and Ottawa. (tf)

COUNTER CHECK BOOKS.—Write us to-day for samples. We are manufacturers of the famous Surety Non-Smut Duplicating and Triplicating Counter Check Books and Single Carbon Pads in all varieties. Dominion Register Co., Ltd., Toronto.

COUNTER CHECK BOOKS—Especially made for the plumbing and steamfitting trade. Not made by a trust. Send us samples of what you are using—we'll send you right prices. Our holder with patent carbon attachment has no equal on the market. Supplies for binders and monthly account systems. Business Systems, Limited, Manufacturing Stationers, Toronto.

DOUBLE your floor space. An Otis-Fensom hand-power elevator will double your floor space, enable you to use that upper floor either as stock room or as extra selling space, at the same time increasing space on your ground floor. Costs only \$70. Write for catalogue "B." The Otis-Fensom Elevator Co., Traders Bank Building, Toronto. (tf)

EGRY BUSINESS SYSTEMS are devised to suit every department of every business. They are labor and time savers. Produce results up to the requirements of merchants and manufacturers. Inquire from our nearest office. Egray Register Co., Dayton, Ohio; 123 Bay St., Toronto; 258 1/2 Portage Ave., Winnipeg; 308 Richards St., Vancouver.

FIRE INSURANCE. INSURE IN THE HARTFORD. Agencies everywhere in Canada. (tf)

HUNDREDS OF TYPEWRITERS of every make and condition are being traded in as part payment on the famous MONARCH. Price and quality are the levers we use to prevent over stock. We believe we can give the best bargains in rebuilt typewriters in Canada. A postal will bring our catalogue and full information. The Monarch Typewriter Co., Limited, 46 Adelaide Street West, Toronto.

INDISPENSABLE In Office, Store, Home—Canadian Almanac, 1911—a National Directory. Complete classified information on every subject of Dominion Interest. Full postage, customs, banking, insurance, legal, educational, newspaper, army, clerical, governmental, particulars of leading institutions and societies. Paper covers, 60c.; cloth leather back, 75c. All stationers, or sent postpaid on receipt of price by The Copp-Clark Co., Ltd., Toronto.

KAY'S FURNITURE CATALOGUE No. 306 contains 160 pages of fine half-tone engravings of newest designs in Carpets, Rugs, Furniture, Draperies, Wall Papers and Pottery with cash prices. Write for a copy—it's free. John Kay Company, Limited, 36 King St. West, Toronto.

MOORE'S Non-Leakable Fountain Pens. If you have fountain pen troubles of your own, the best remedy is to go to your stationer and purchase from him a Moore's Non-Leakable Fountain Pen. This is the one pen that gives universal satisfaction and it costs no more than you pay for one not as good. Price \$2.50 and upwards. W. J. GAGE & CO., Ltd., Toronto, Sole Agents for Canada.

MULTIPLE TYPEWRITING and real printing turned out by the Multigraph in your own office will get more business and reduce printing bills—saves 25% to 75% of average annual printing cost on stationery, system forms and circulars. Write for particulars. American Multigraph Sales Company, Limited, 129 Bay Street, Toronto, Ont.

MODERN FIREPROOF CONSTRUCTION. Our system of reinforced concrete work, as successfully used in many of Canada's largest buildings, gives better results at lower cost. "A strong statement" you will say. Write us and let us prove our claims. That's fair. Leach Concrete Co., Limited, 100 King St. West, Toronto.

PENS—The very best Pens made are those manufactured by William Mitchell Pens, Limited, London, England. W. J. Gage & Co., Limited, Toronto, are sole agents for Canada. Ask your stationer for a 25c. assorted box of Mitchell's Pens and find the pen to suit you.

THE "Kalamazoo" Loose Leaf Binder is the only binder that will hold just as many sheets as you actually require and no more. The back is flexible, writing surface flat, alignment perfect. It cannot get out of order. No exposed metal parts or complicated mechanism. Write for booklet. Warwick Bros. & Rutter, Ltd., King and Spadina, Toronto.

WAREHOUSE AND FACTORY HEATING SYSTEMS. Taylor-Forbes Company, Limited. Supplied by the trade throughout Canada.

YOU don't buy a National Cash Register—it pays for itself. Saves money. Prevents mistakes. We can prove it. National Cash Register Co., 285 Yonge Street, Toronto.

BOOKS FOR PLUMBERS.

PRACTICAL HINTS ON JOINT WIPING, for beginners in plumbing. This book contains two original articles on joint wiping by experts, together with a selection of letters and articles on various important phases of the subject. 66 pages, 41 illustrations. Price 25c.

MACLEAN PUBLISHING CO., Technical Book Dept., 143-149 University Avenue, Toronto.

THE WANT AD.

The want ad. has grown from a little used force in business life, into one of the great necessities of the present day.

Business men nowadays turn to the "want ad" as a matter of course for a hundred small services.

The want ad. gets work for workers and workers for work.

It gets clerks for employers and finds employers for clerks. It brings together buyer and seller, and enables them to do business though they may be thousands of miles apart.

The "want ad." is the great force in the small affairs and incidents of daily life.

Nature has solved the problem of distribution. It uses a multitude of agents to effect the distribution of its products.

Nature does not expect every seed to fall upon fallow ground and to take root. But, it achieves a profitable percentage upon its distribution. This is all that an advertiser has to do to reap a profitable harvest on his outlay.



Two years ago there were mighty few pipe die users who knew about the Nye Die. To-day there are over 15,000. Over 400 jobbers carry them in stock. Why? Not because they love me—99% of 'em never saw me. I got 'em nearly all by printing my "ads" in the papers—offering my

10 DAY FREE TRIAL

All jobbers have the right to offer any pipe die user a Nye Die for a 10 day trial at my risk, so he can see for himself just what the difference is between other dies and the kind I make,—

NYE EASY CUTTER DIES



I GUARANTEE—every die I make. It's printed on the die you get. Isn't it best to BUY as well as SELL a guaranteed tool? HAVE YOU TRIED ONE?

"NYE" the die man

Nye Tool & Machine Works

124 No. Jefferson Street, Chicago, Ill., U.S.A.

DIRECTORY OF MANUFACTURERS

Plumber and Steamfitter receives, from time to time, enquiries for the names of manufacturers of various lines. These enquiries come from firms who usually intimate they have looked through Plumber and Steamfitter but cannot find any firm advertising the line in question. In many cases these firms are anxious to secure the information at once. This page enables manufacturers to keep constantly before the trade lines which it would not pay to advertise in larger space.

EMERY WHEELS.



Canadian Hart Wheels

442 Barton St. East, Hamilton
Corundum and Emery Wheels
Grinding Machines, Beaver
Oil Stones.

SHELF BRACKETS.



Will Hold Up a Shelf

That's what a shelf bracket's for. For this purpose there can be NOTHING BETTER, NOTHING CHEAPER than the BRADLEY STEEL BRACKET. It is well Japanned, Strong and Light. The saving on freight is a good profit aside from the lower price at which the goods are sold. Order direct or through your jobber.

ATLAS MFG. CO., NEW HAVEN

FILTERS.

Anti-Splash Tap Fitters

The "Galvo" Filter and Water Steriliser
"Perfection" Fire Extinguishers
There's good money in them for hardware dealers.
Write for Prices.

The Anti-Splash Filter Co.
OWEN SOUND - - - ONTARIO

MANUFACTURERS' AGENTS.

The Manufacturers Sales Co. MONTREAL

Frederick H. Reid, Manager

Representing manufacturers of high-class specialties, including "Handhook," "So-Clean," and others.

We are open at any time to receive propositions from first-class manufacturers who wish to be represented in Canada. Write at once. Best of references.

MANUFACTURERS' AGENTS.

Western Distributors, Limited CUSTOMS BROKERS

Wholesale Commission Merchants and Manufacturers' Agents. Cars Distributed, Warehoused and Forwarded. Warehouse on Transfer Track. Business solicited.

OUR POSITION IS YOUR OPPORTUNITY
SASKATOON, WESTERN CANADA

BRONZE POWDERS

BRONZE LIQUIDS

The
Canadian Bronze
Powder Works
Montreal Toronto
Works, Valleyfield

Send us your orders and we guarantee the quality



THIS IS THE DAY OF

INVESTIGATION

Get in line and let us prove to you that the

GENUINE
Armstrong Stocks and Dies

ARE THE BEST.

Catalogue on request.



The Armstrong Mfg. Co.

317 Knowlton St.
Bridgeport, Conn.

When writing advertisers kindly mention having seen the advertisement in this paper.

TINSMITHS' HELPER AND PATTERN BOOKS



A useful handbook for Tinnerns and Sheet Metal Workers. It treats the simpler problems in pattern cutting occurring daily in the shop besides giving tables and information constantly needed by the mechanic.

Section 1—DIAGRAMS and PATTERNS. Demonstrates 50 examples of pattern work, such as cutting flared tinware, elbow patterns, etc.

Section 2—EPITOME OF MENSURATION. Describes how to find the area and circumference of a circle, contents of a sphere, etc.

Section 3—TABLES, RULES and RECIPES. Gives the weights of sheet metals, capacity of cans, recipes for mixing solders, cements, etc.

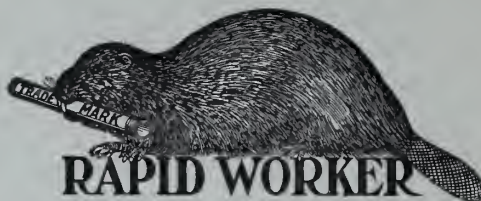
Price \$1.

53 Figures

MacLean Publishing Company
Technical Book Dept. 143-149 University Ave., Toronto, Can.

Nature has solved the problem of distribution. It uses a multitude of agents to effect the distribution of its products.

Nature does not expect every seed to fall upon fallow ground and to take root. But, it achieves a profitable percentage upon its distribution. This is all that an advertiser has to do to reap a profitable harvest on his outlay.



RAPID WORKER

One man with a Beaver Die Stock is worth two or three men with any other Die Stock made.

"Beaver" Adjustable Die Stocks

HAVE cut the cost of pipe threading in two because they will thread all sizes of pipe without changing dies.

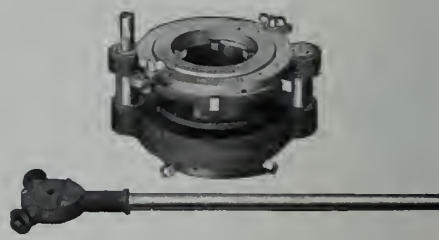
They are built on the receding principle which positively enables one man to thread any size of pipe and produce absolutely tight joints for all work, including hot water. They save the time formerly used up in changing dies and looking after loose parts, and eliminate all of thread-stripping when backing off.



No. 25A, threading 1, 1¼, 1½, 2-inch pipe.
A boy can operate it,



No. 6, threading ¾, 1, 1½, 2 inch, complet



No. 60. Uses two sets of dies. One set cuts 2½, 3, 3½ in. the other cuts 4, 4½, 5, 6 in.; they are inserted without removing any parts.

No loose Bushings or loose Dies on No 25A and No 6, and they cut 1, 1¼, 1½ and 2-inch pipes.

We can furnish a separate set of dies for 1, 1¼, 1½ and 2-inch pipe

Write us for Illustrated Price Lists.

BORDEN CANADIAN COMPANY,
66 Richmond Street East Toronto, Ontario

THE PLUMBER IS JUDGED BY HIS MATERIALS



"EMPIRE" CLOSETS

are the choice of plumbers who know, and to recommend them is to advertise your own standing in the trade.

The seat is of special construction, the tank large and the bowl well made and of good shape.

Full range of Plumbers' Supplies. Immediate shipments guaranteed.

EMPIRE MANUFACTURING CO., LTD.
LONDON, ONT.



YOU CAN SAVE MONEY BY DEALING WITH US

Our stock of Plumbers' Supplies is one of the largest in the Dominion, and embraces all the most reliable lines, from a washer to the complete modern bathroom outfit. When you order

"Scotia" Plumbing Supplies

you get the right goods quick. You save money by getting the

Lowest Prices

consistent with good quality and by avoiding delayed or wrong shipments.

Test us with a trial order for anything in plumbers' supplies.

WM. STAIRS, SON & MORROW, Ltd.
HALIFAX ESTABLISHED A.D. 1810 NOVA SCOTIA

The "SOVEREIGN" RADIATOR

Brings Surprising Results.

It is a loss of time to be constantly repairing radiators.

You lose your customers' confidence if they do not give satisfaction.

INCREASE YOUR TRADE by selling our High Grade Guaranteed "SOVEREIGN" RADIATORS.

The "SOVEREIGN" always brings results because every Valve, every Casting and every Joint is absolutely efficient and reliable.

Our Radiators are very Artistic and are made of the BEST GRADE MATERIALS. You will take pride in selling them.

WRITE FOR CATALOGUE AND PARTICULARS

Taylor-Forbes Co., Limited, Guelph, Ont.

TORONTO: 1088 King St. W. Taylor-Forbes Co., Ltd., 246 Craig St. W., Montreal, Que. Taylor-Forbes Co., Ltd., 1070 Homer St., Vancouver, B.C. W. R. Mathers, 46 Princess St., St. John, N.B. The Vulcan Iron Works, Winnipeg, Man. The Mechanics Supply Company, Quebec, Que.



The Thomson Smoke Test Machine

FOR TESTING PLUMBING

We Claim the Following Facts:



Smoke Production—The greatest smoke producer known.

Simplicity—So simple that a novice can work it.

Sensitiveness—So sensitive that the slightest reduction in pressure will cause the cover to sink.

Durability—No glass gauges to break, or freeze and burst. No valves to clog. Nothing to get out of order.

Portability—A boy can carry it with **one hand**. It is sixteen inches high, 11 inches by 11 inches square.

Smooth and Easy Action—Double acting bellows, which can be worked with one finger.

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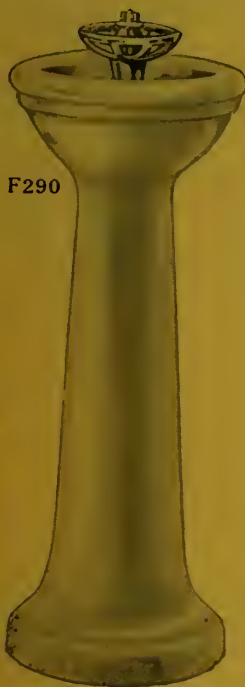
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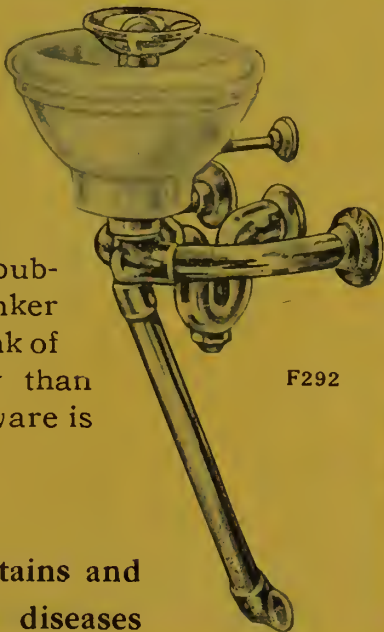
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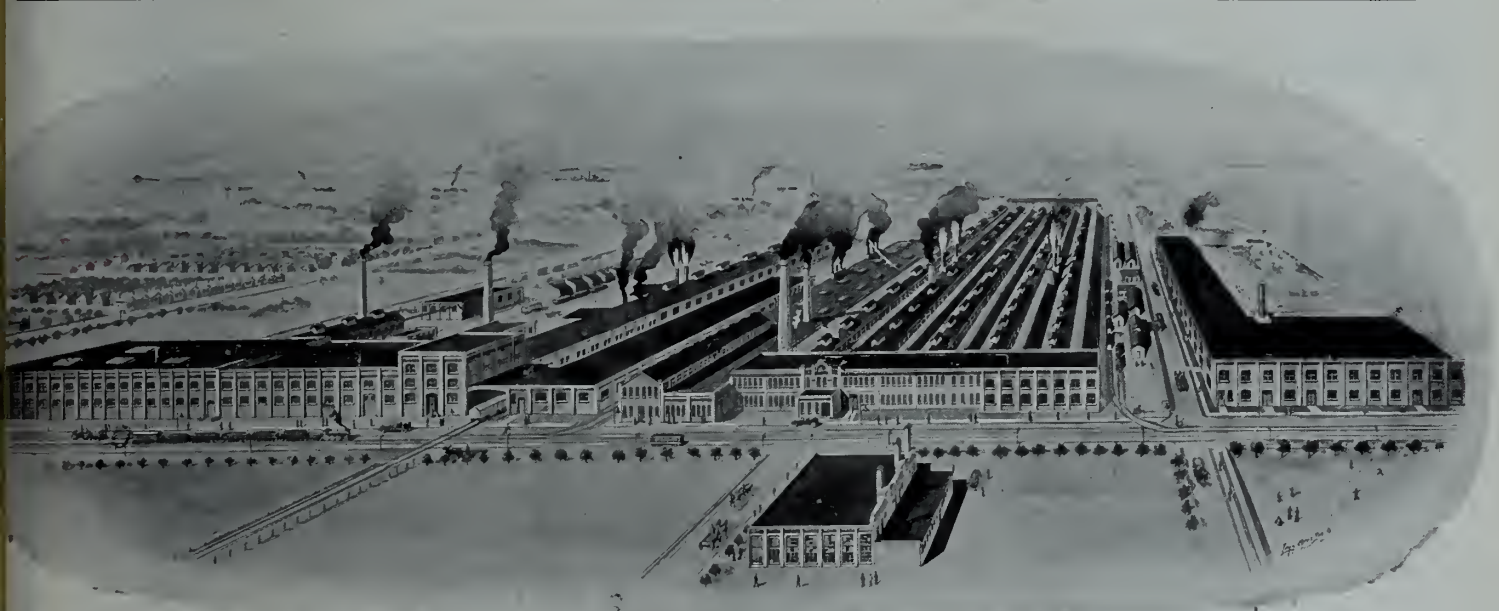
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Fig. I

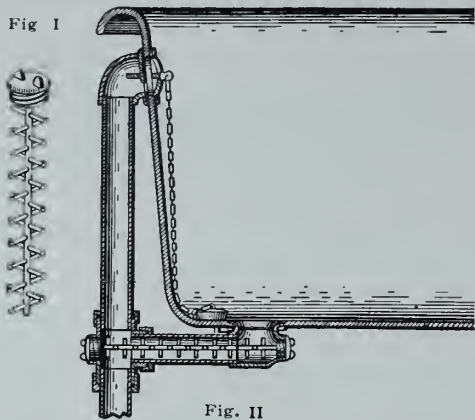


Fig. II

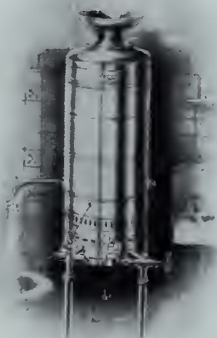
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ONTARIO

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a wonderful incandescent lamp. It had all the other lamps skinned to a frazzle, and the man went traveling with his lamp. Everywhere he went he met with orders. It was so easy that the inventor hurried back home and hid his light under a bushel!

"This is such a cinch," said he, "I will keep it covered! There is nothing like it anywhere and the whole world will have to come and buy of me!" Then the man went into a hole with his wonderful light and drew the hole in after him. And the jobbers who had seen the lights and ordered them, wondered why nobody came to buy! Time went by and the lights on their shelves were covered with dust. Finally the cost was charged to profit and loss and the wonderful lights were sold for junk!

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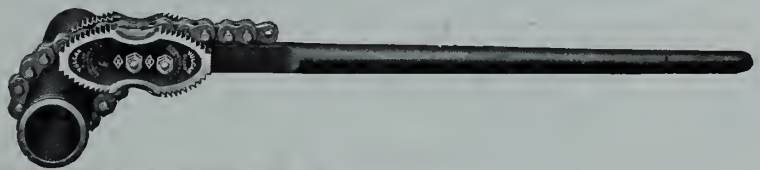
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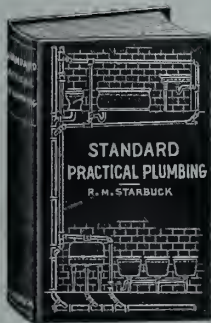
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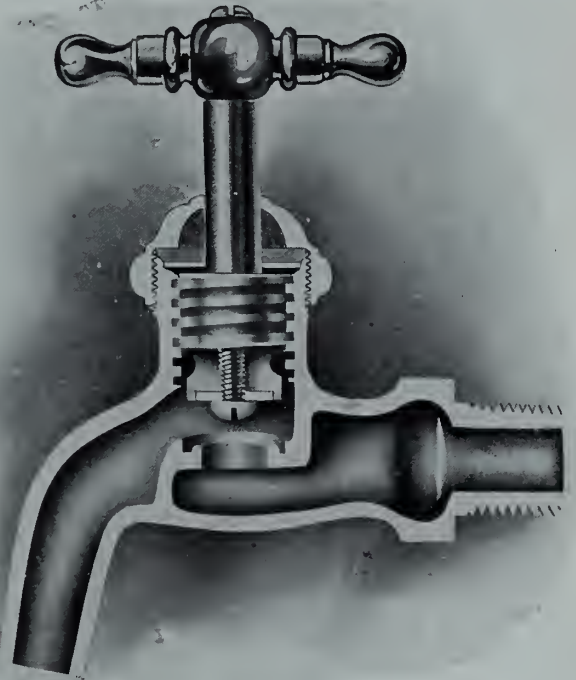
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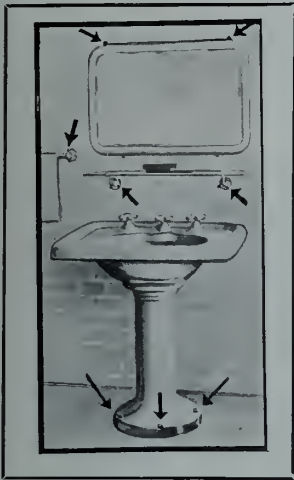
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They are a patented device used by plumbers for every purpose where an ordinary bolt or screw is not practicable.

Let us send you some free working samples and our 70-page catalog, No. 74, with information that will be a help to you and show you a way to do better work.



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ters, Sanitary Inspectors, Heating and
Ventilating Engineers, City Engineers,
Boards of Health, Architects, etc.

TORONTO, JUNE 1, 1911

In two weeks, the 1911 convention of the National Association of Master Plumbers and Steamfitters of Canada will open at Port Arthur and Fort William.

It is now certain that the gathering will be one of the most successful on record, as assurances have been received from all parts of the country that delegates in large numbers will attend.

BOOST THE CONVENTION.

The programme prepared is one of unusual interest. A number of questions of vital importance will be up for consideration and the deliberations may, therefore, have a deep and lasting effect on the future of the trade.

A question which will probably create considerable discussion is the proposed appointment of a salaried officer to act as secretary of the National Association and organizer for the Dominion. The idea has been advanced before but has never gained much headway. Many of the present officials of the association have come to the conclusion, however, that the appointment of a permanent officer on salary has become not only desirable but necessary.

Undoubtedly there is much to be said in favor of the proposal. The master plumber is a busy man and there are certain seasons of the year when he finds it next to impossible to attend to correspondence, except that which is absolutely necessary. It is, therefore, imposing a heavy burden on a man to make him secretary when that position entails attention to heavy correspondence at all seasons of the year. No man can afford to neglect his own business and it is doubtful if it will be possible in the future to have the work of the secretary's office attended to as in the past.

The appointment of a salaried man would undoubtedly result in a revival of interest in association work; that is if the right man were secured. Not only would the secretary be able to keep up correspondence thoroughly but it would devolve on him to visit all parts of the country on organizing trips. The formation of local associations and a stimulation of interest in provincial work would undoubtedly follow. A heavy expense would be entailed. But would it not be worth it?

Another problem which will come up at the convention will be the proposal that the name of the association be changed to "Society of Sanitary and Heating Engineers." In this connection the fact that the Ontario

PROPOSED CHANGE IN NAME.

provincial body has adopted that name will doubtless carry considerable weight. The Ottawa local association has borne that name for years and, since the last national convention, when the matter was very seriously considered, the Calgary body has fallen into line.

There can be no doubt that the new name more accurately describes the calling now followed than the time-honored name of "plumber." In fact, the plumber is no longer a plumber. He does not confine himself to working in lead. He has to solve intricate problems involved in the heating and ventilating of the house, as well as in the installation of sanitary fixtures. His work is highly specialized in these three lines and calls for a wide range of technical knowledge as well as practical and mechanical skill. To acquire a thorough grounding requires years of steady application. In fact, the plumber to-day is, in reality, a sanitary and heating engineer.

There are many in the trade who cling to the name of "plumber" and do not relish the idea of changing it. For those who have been engaged in the work all their lives and who have, by their application of straightforward principles and honest endeavor to all that they have undertaken, done much to raise the name of plumber into the highest repute there are undoubtedly sentimental reasons for feeling opposed to any change in name. Still, it should be borne in mind that the proposed new name would bring with it an improved standing. Of that there can be no doubt. It is a name which can be adopted with all fairness inasmuch as it accurately describes the calling followed.

Consideration should be given at the same time to the idea promulgated at the organization meeting of the Ontario society with reference to the establishment of an entrance examination. Anything which would help to keep up the standard of work done is well worth consideration.

The officers engaged in preparing the programme for the convention will, it is hoped, allow a certain amount of time for the work of arousing interest in provincial organization. It will be the "psychological moment" to go about it. Delegates will be on hand from every province and their interest and enthusiasm will be worked to the highest pitch. If preliminary steps were taken, it would be found much easier later to keep the work moving. If a committee from each province were appointed to assist the provincial

PROVINCIAL ORGANIZATION.

vice-president and definite dates were set for the organization meetings, there would be a strong probability of ultimate success.

* * *

The plumbing trade is keeping pace with the rapid advance of the West. About two new firms a day are reported from some section of the prairie provinces. A pretty good average.

* * *

That "all work and no play makes Jack a dull boy" is an old truism. It holds good in the case of grown men as well as with reference to the growing generation. A hard working man needs recreation just the same as the school boy. The master plumber is a hard-working man—no one will deny that, least of all the M. P. himself—and therefore, as Euclid puts it, the M.P. needs recreation.

Take Saturday afternoon off, you need it. Get out in the open, go to a baseball or lacrosse match, forget your business, your books and your never ending calculations, for the once. It will pay you in the end. You will go back to your work fresher, brighter, more full of ambition and energy. Enthusiasm and energy are bound to flag if there is no respite from the daily grind.

The writer has known men who worked hard all day and plodded over books half the night. Holidays were unknown to them. They got along pretty well and accumulated quite a store of the material which is sometimes called the root of all evil, but was it worth it at the price?

* * *

Geo. Cooper suggests that a prize be given to the master plumber who can pronounce accurately the full name of the river at the foot of which Fort William and Port Arthur are situated.

* * *

In the course of an interesting article, Modern Sanitation suggests that the height of kitchen sinks be changed. The point urged is that at present the sinks are placed too low for the convenience of the ladies who use them a great deal in carrying out their daily household tasks. The article goes on to say:

CONSULT THE WOMEN FOLKS.

"Establish a practice or custom and that precedent will be followed long after the cause which led to its adoption has been relegated to the scrap pile. This is true whether the standard established is a good one, suitable for the new order of affairs, or whether it was wrong in the beginning and never should have been adopted.

"Plumbing practice contains many such false starting points, but the one we now have in mind is the height of kitchen sinks. In some strange, long-forgotten manner the standard height at which a sink should be set has been established as 2½ feet, and over 99 per cent. of the sinks installed are placed at that level above the floor. Yet, ask any woman what she thinks of the practice and she will unhesitatingly tell you the sinks are set too low."

There is some wisdom in the suggestion that the women folk should be consulted in establishing a standard height for sinks.

* * *

A "squeeze" in tin is said to be on the books for the not far distant future. The bears must be rather used to squeezes in tin by this time.

Are you going?

* * *

All roads lead to the Twin Cities this month.

* * *

Valuable reforms are under way at London, Ont.

* * *

Better postpone repainting that sign until the N.A. decides on the name question.

* * *

Out in Calgary the master plumbers and the journeymen work together on the best of terms. It is a good sign inasmuch as it proves beneficial to both master and journeyman.

* * *

The resale price is said to be invading Canada. There are many points to be urged in its favor when applied in some lines.

* * *

A Calgary plumber has his office on the sixth floor of a skyscraper. How's that for putting the business on a high level?

* * *

It is suggested that a game of baseball be played between delegates from the east and the west.

Our Visitors



Will C. Power, of the Wallaceburg Brass Mfg. Co., was a recent visitor at the office of Plumber and Steamfitter. As he has done a lot of traveling in the interests of the firm his genial face, as shown above, will be well known to most members of the trade. Mr. Power has a pleasing conversational manner—what salesman hasn't for that matter?—and he lingered for some time in the sanctum discussing trade problems. It is seldom, however, that he finds time to see anyone but customers for he is one of the most aggressive men in that branch of the business. It is due to the work of such men as Will C. Power that the brass industry in Canada has made such rapid advances.

He is a big man in other ways; in stature, for instance. He carries with him a sense of power, which arises in the first place from his size and which is afterward confirmed and made permanent by the forcefulness of his arguments. A genial manner goes with it and he makes friends rapidly. We hope to see him back again at the earliest opportunity.



OFFICIAL NEWS of THE N.A.M.P. & S.F. of CANADA



Arrangements Under Way for Annual Convention

A Big Attendance is Assured—Important Questions to be Introduced—Manufacturers' and Jobbers' Exhibit is Decided Upon—Reports From Different Sections as to Attendance.

PORT ARTHUR, May 26.—Arrangements are now well under way for the 1911 convention of the National Association of Master Plumbers and Steamfitters of Canada, which opens on June 12 and ends June 17. From all indications it will be one of the most successful ever held. Certainly, the local committees have worked hard enough and have not neglected a single opportunity to create interest in the event.

J. W. Barnes, secretary of the correspondence and advertising committee, has been a busy man. He has sent letters to representative men in all parts of the country. Many replies have been received and so far twenty-seven have written in, stating that they intend to be on hand. This is, of course, exclusive of the delegations which will attend from the larger cities. "We anticipate having one of the largest conventions

ever held in Canada," declared Mr. Barnes to a representative of Plumber and Steamfitter.

A Splendid Programme.

The Twin City Association have held several meetings recently and have received reports from the various committees. The entertainment committee have decided upon their programme, which contains many events of interest.

At the last meeting of the convention committee, a group photograph was taken, which is reproduced below. The group is made up of the following: Jack Marshall, entertainment and sports; J. C. McRae, advertising and correspondence; W. Sime, soliciting; J. W. Barnes,



CONVENTION COMMITTEE.

Top row (reading from left to right.)—Jack Marshall, Port Arthur; J. C. McRae, Fort William; W. Sime, Port Arthur; J. W. Barnes, Port Arthur.

Second row.—Ed. Higginbottom, Fort William; A. C. Waltz, Port Arthur (President Twin City Association); Alex. Cameron, Fort William.

advertising and correspondence; Ed. Higginbottom, entertainment and sports; A. C. Waltz, reception, Alex. Cameron, soliciting.

To Have Exhibit.

It has been decided to hold a manufacturers' and jobbers' exhibit. This was resolved upon after some consideration, it being recognized that an exhibit would add considerably to the interest. As the time left was short, however, it was decided not to charge any fee. The spaces will be given free to firms desiring to exhibit. A circular letter to that effect has been sent out to manufacturers and supply houses.

Although the time left for preparation is short, it is believed that a large number of exhibits will be arranged and that the interest for the delegates at the convention will be considerably enhanced thereby. A number of firms have already wired in asking for reservations.

Freedom of Cities.

A splendid reception is assured to all who make the trip. The freedom of both cities will be extended. The members of the Twin City Association will do everything in their power to make the week highly interesting and full of lively entertainment for the visitors.

Important Questions Pending.

Toronto, May 27.—Every effort is being made at this end to help make the convention a success. President Cooper has been conducting some correspondence with members of the Association.

IN THE GALLERY OF NOTABLES.



"Bob" Shannon is always in a hurry. His duties as Ontario vice-president and president of the new Ontario society combined with the multitudinous cares of his own business, keep the genial R. J. on the jump all the time. Our artist predicts that, if he gets to the Twin Cities at all, it will be by breaking a few speed records to the train at the last moment.

IN THE GALLERY OF NOTABLES.



This is truly an easterner's idea of vice-president Thomson, of Winnipeg. We do not think it at all probable that he will visit the convention in the highly "unconventional" garb in which he is depicted here nor have we any reason to believe that he is handy with the six shooter or lariat. Still, he has always seemed to typify the breezy aggressiveness of the West.

Secretary Legrow has been a busy man, attending to the official correspondence relating largely to the coming convention. He estimates that during the past fortnight he has sent out about 350 letters to master plumbers in all parts of the country. Many answers have been received. Some state that they have decided to attend the convention while others are considering the matter.

The Following is a Copy of the Circular Letter Sent by the Secretary:

Dear Sir:—

The National Association of Master Plumbers will meet in the Twin Cities, Port Arthur and Fort William, from June 12th to 17th, inclusive. This will be one of the most important conventions ever held in Canada, and no master plumber can afford to miss it, as some of the questions to be taken up at the convention are of the most vital importance to master plumbers.

The Twin Cities are thoroughly organized to entertain the delegates. They will also have reduced rates on the railway and steamboat lines. If you intend

to attend, or if you know how many delegates would be coming from your section, we possibly could make arrangements to travel together from Toronto.

Don't forget that anything you may have in mind that would be of importance to the plumbing fraternity. Come prepared to introduce it before the convention. If there is any other information required, kindly communicate with me.

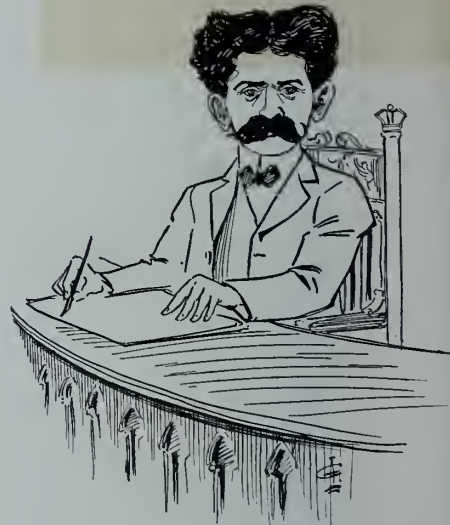
Respectfully yours,
Lewis LeGrow,
Secretary.

It is anticipated that the reports of the officers this year will contain a wide range of important suggestions and recommendations. Among the matters likely to be mentioned is the advisability of issuing a certificate to all members of the association. This idea has been broached before and has been received with favor. It was adopted at the organization meeting of the Ontario Society of Sanitary and Heating Engineers held at Toronto on Good Friday. It is also possible that something will be said with reference to the suggestion that the official term of office be extended.

The report of President Cooper will contain a number of recommendations based on his experience during the past year.

Secretary LeGrow will embody in his report an account of the proceedings at

IN THE GALLERY OF NOTABLES.



It is not necessary to explain who this is. Not only do the leonine locks betray the identity of the subject of our sketch but the occupation affords a clue. Harry Mahoney, of Guelph, is an alderman and has proven himself an earnest, faithful administrator of public affairs. Our artist has made the chair so ornamental that it approaches the dignity of the seat provided for the mayor of the Royal City. Can it be that a prophetic instinct guided the pen?

IN THE GALLERY OF NOTABLES.



This is "Charlie" Taylor, plumber and cricketer, of Brantford. Time was when Charlie could bowl as fast as any of them but a tendency to "embonpoint" interferes a little with his play nowadays. Still, the last time the writer stood up to him, he managed to get the centre stump. He is an active member of the association.

the executive meetings during the year. Mention will, therefore, be made of the important topics discussed by that body at the various sessions held. The executive decided among other things on the advisability of appointing a salaried secretary and organizer for the Dominion; the drafting of legislation for the elimination of the general contractor; and on the changing of the name of the association to "Sanitary and Heating Engineers." All these questions are of live interest and it is expected that there will be lengthy discussions on each point.

Vice-President Walsh, of Montreal, will have an interesting report to make and each provincial vice-president will be heard from.

Provincial Organization.

It is assumed that a determined effort will be made to rouse interest in the question of provincial organization. G. F. Frankland, of Toronto, who is secretary of the newly organized Ontario Society, will introduce a motion dealing with the problem.

It is intended, if possible, to get the organization of an association for each province started during the convention week. The method pursued in past years has been to appoint a vice-president for each province and leave all matters affecting that province in his hands. While the vice-presidents, under the proposed new arrangement would still have full authority, their hands would be strengthened by the commencement of arrange-

ments tending toward provincial organization and they would be given something tangible to work upon during their term of office.

It is felt by all the officers that this matter is one of the most important to be dealt with and an earnest effort will be made to put the organizations on a good working basis.

Will go by Boat.

The Ontario delegates have not yet completed arrangements for the trip to the Twin Cities. They are waiting for definite word as to rates. It is probable, however, that the majority of the delegates will go in a body by boat via Owen Sound. This route gives promise of a very pleasant trip and on that account is favored by a great many. On the other hand some point out that by going by rail a day is saved and they seem to favor that method of making the trip. To go by boat, it would be necessary to leave Toronto on Friday afternoon. As Saturday is a half day only, it is felt that some of the delegates could get away on Friday without serious inconvenience or loss.

It is practically certain that all the Ontario delegates will go in a body. The Montreal party will also travel with the Ontario delegates. It is probable,

IN THE GALLERY OF NOTABLES.



Any person who had only seen Lewis LeGrow when he boasted a fine large moustache, would probably not recognize this as a likeness of the hard-working secretary of the N.A.M.P. & S.F. It is, however, a life-like representation of the worthy secretary, engaged in his favorite and daily avocation—writing letters to members of the association. He believes, and has good reason to believe, that a man should be appointed to devote his whole time to the work.

IN THE GALLERY OF NOTABLES.



As Geo. Cooper will preside over the deliberations, our artist has depicted him in the guise of a potentate. George has discovered that there is much truth in the statement that "uneasy lies the head that wears a crown," for during his year as president, he has found lots of work to occupy him every day.

therefore, that the idea of assembling a big party at Toronto and going on to the Twin Cities en masse will be carried out.

Company Representatives.

There will be a large number of traveling men and company representatives go from here. Practically all the manufacturers and supply houses will be represented. Many of the firms are intending to put in exhibits. The delegation from this point will consequently be an exceptionally large one.

Big Montreal Delegation.

Montreal, May 25.—At the regular monthly meeting, the question of sending delegates to the annual convention was taken up. The delegates selected were: John Watson, Joseph Thibault, W. J. Graham, Joseph Laurier and John A. Gordon. The alternates selected were P. C. Ogilvie, W. Ryan, L. J. Conroy and D. A. Bethune.

James Ballantyne, president of the Montreal Association and John R. Meadowcroft regretfully declined to act as delegates, as both expect to be absent from the city during the months of June and July. In explaining the withdrawal of Mr. Ballantyne, vice-president Walsh, of the National, writes to the editor of Plumber and Steamfitter: "Mr. and Mrs. Ballantyne will attend the coronation as mayor and mayoress of Montreal West, a small town about the size of Toronto, near Montreal."

Vice-President Walsh and provincial vice-president H. W. Munday, will also

attend as officers of the National, making in all seven from Montreal. It is likely that two ladies will be in the party. The Montreal crowd will not be found lacking in enthusiasm.

Delegates From Calgary.

Calgary, May 25.—Provincial Vice-President E. J. Young writes to Plumber and Steamfitter:

"Below please find list of accredited delegates from our association to the Twin City convention:—

E. J. Young, president.

R. J. Priestly, past president.

James Marr, past president.

E. L. Martin, member of executive.

In addition the Association have made it an object for any other member to go along so as to have a good attendance from Calgary. The Edmonton Association are sending a good delegation.

Word From the East.

St. John, N.B., May 20.—It is not yet known who will be going from here to the convention as yet but there will

doubtless be some delegates in attendance from this province.

Vice-president Geo. Blake, when seen with reference to the matter, stated that a meeting was being held to organize and that he believes that the matter would be brought to a successful issue.

THE WEST INTERESTED.

Winnipeg, May 9.—Reports have been received from different sections and the tenor of them all is the same with reference to the coming convention. Keen interest is being shown in all parts and, as the place of meeting is sufficiently close at hand to facilitate attendance, it is certain that there will be a larger representation from western points than ever before.

Winnipeg will send several men and delegations are counted upon from Calgary, Edmonton, Regina, Moose Jaw and, in fact, from all of the larger points.

Half Fare to Twin Cities Will Be Given

**If There are One Hundred Delegates This Rate Will be Allowed
—A Splendid Attendance is Therefore Assured—Cheap Rates
Apply Over all Lines.**

Port Arthur, May 25.—The convention committee of Fort William and Port Arthur have arranged with the Canadian Northern Railway, the Canadian Pacific Railway and the Grand Trunk Pacific Railway, for reduced fares from any point on these lines.

The following letter has been received by A. Cameron, duly signed by the general passenger agents of the three roads:

"Referring to your application for reduced rates to the above convention to be held in Fort William, June 12th to 17th, 1911.

"We have pleasure in enclosing herewith two copies of our convention forms, one copy of which should be executed by the secretary who will sign the certificates at the meeting and returned to the issuing line, the other to be retained for your information. The enclosed forms set forth fully the reduced fare arrangements we will authorize and trust they will be entirely satisfactory.

"Delegates from points on the Grand Trunk Pacific must purchase one way tickets with standard certificates to nearest junction point with Fort William terminal lines, and at junction points repurchase one way tickets with standard certificates.

"While the meeting is in progress it will be necessary to collect all certificates and execute them at a meeting with representatives of the Canadian Northern and Canadian Pacific at Fort William, certifying as to the number in attendance. These representatives will

then jointly validate the certificates, and after they have been properly executed and validated they will be honored for return tickets under conditions outlined in the attached."

A Half-fare Rate.

The clauses in the convention forms referring to rates, are as follows: "If one hundred or more delegates hold Standard Certificates correctly filled in and certified as directed they will be returned to their original starting point free. If twenty-five or more delegates hold standard certificates correctly filled in and certified as directed, they will be returned to their original starting point at one-third of the one way first-class fare (not temporarily reduced).

"If twenty-four or less delegates holding standard certificates, correctly filled in and certified as directed, they will be returned to their original starting point at two-thirds the one-way first-class fare."

As it is fully expected that there will be more than one hundred holding these standard certificates, it is practically assured that the half fare rate will be secured. This will doubtless be a high incentive for many to attend.

AN ELUSIVE SUBSCRIPTION CROOK

In several recent issues, Plumber and Steamfitter took occasion to warn its readers against the operations of one W. Keppel White, who was taking subscriptions and collecting accounts for the MacLean publications without authority.

The efforts which have been made to locate and punish this man would form a good plot for a detective story. As far back as last December, complaints were reaching this office of fraudulent collections made by White. He traveled from town to town in the Maritime Provinces, representing himself as a subscription agent of the MacLean Publishing Co., whose papers have a very large circulation there, and therefore afforded a great scope for the game he was playing. He was accompanied by his wife and a child of about four years. He is described as being of light complexion, five feet six inches in height, and weighing about one hundred and fifty pounds. He was clean shaven, and wore a light rain coat and stiff hat.

The first definite clue as to White's whereabouts, came from St. Stephen, N. B., where he is said to have spent from April 6th to 22nd, leaving on that date, without settling his hotel bill.

White's method was to go into a store and ask the proprietor if he subscribed to Plumber and Steamfitter. Receiving an affirmative reply, he would ask to see the last copy. Learning from the label, the expiring date of the subscription, he would take out an ordinary receipt book, and give a receipt for whatever amount was due.

W. A. Mills of St. Stephen, gave the accredited MacLean representative considerable assistance in tracing White, and it was learned that he had gone from St. Stephen to Eastport, Me.

Meanwhile, investigations conducted by the MacLean Publishing Co., revealed the fact that White had been arrested in Sydney, last October, and, for a similar subscription fraud, sentenced to two years' imprisonment, but allowed to go on suspended sentence.

A little over a week ago, W. L. Baker, of the Bank of New Brunswick, on the Island of Grand Manan, N.B., wired the company that White was in that town collecting subscriptions for MacLean papers, and asking if he were authorized. A telegram was immediately sent to Mr. Baker asking that he request the police to detain White.

Jos. E. Gaskill, from whom White had collected \$4.75, then swore out a warrant and arrest followed. The prisoner, however, put up a great talk, and nearly succeeded in securing his discharge. White acknowledged his sentence at Sydney last October, he told a plausible story of a miscarriage of justice. The magistrate kept him all night, allowed him his liberty in the morning and, then, upon Mr. Gaskill's persuasion, had him re-arrested, and remanded until Monday morning the 8th inst.

By this time Hon. George J. Clarke, K.C., of St. Stephen, N.B., had been retained by the MacLean Publishing Co. to act for them in prosecuting White. A good case had been prepared when, on Tuesday of this week, Mr. Clarke wired that White had broken jail, and effected his escape into the United States. There appears to be something queer about his escape which is being investigated by the attorney-general of New Brunswick.

Twin Cities---Meeting Place of East and West

A Brief Description of Port Arthur and Fort William, Where the Convention of the National Association is to be Held—The Great Advantages Enjoyed by Both Places, and a Brief Resume of the Rapid Growth of the Twin Cities.

A HAPPY choice was made when it was decided to hold the 1911 convention of the National Association of Master Plumbers and Steamfitters, at Port Arthur and Fort William—the Twin Cities. Situated practically half way between the east and the west, with excellent transportation facilities both ways, the Twin Cities afford an unparalleled opportunity for members of the trade from all parts of the country to meet together.

But advantages other than those afforded geographically are offered. The Twin Cities have an association, which has done much to set the trade there on a splendid footing. Conditions in Port Arthur and Fort William are probably not ideal, but they are as close to that as it has been found possible to get as yet. The workings of this association will provide an interesting study for members hailing from regions less favored in that respect.

Further, the Twin Cities offer advantages from the entertainment standpoint which promise to make the trip worth while, apart from the tangible benefits to be obtained. The two cities are situated in the midst of natural conditions which render them picturesque and interesting in the extreme.

A Word About Fort William.

Fort William is happily situated. It is not only picturesquely beautiful; it has natural advantages as well from both the commercial and industrial

standpoints. Fort William holds the key stone position between the east and the west. It has been termed the "gateway to the granary of the World." Situated at the point where the Kaministiquia

elements which go to make Fort William beautiful are also the source of its industrial growth. Where the Kam river rushes in tempestuous torrent over the falls at Kakabeka, 20 miles from



The new hotel of the Canadian Northern Ry., the Prince Arthur, at Port Arthur.

river empties into Thunder Bay, it is one of the finest ports of nature. The word "Kaministiquia," which means "the gathering of the waters," tells in itself the strategic advantages as an important point of transportation enjoyed by this bustling young city.

It is curiously a fact that the very

Fort William, it not only presents a spectacle of almost unparalleled grandeur, but it also provides cheap power for the industries and commercial enterprises of the town.

A Bit of History.

Fort William was founded by Du Lhut, a French explorer, as far back as 1669;



A view of the water front at Port Arthur, taken October, 1910.

at least, he erected a hut at the foot of the Kaministiquia and probably rested there for some time before resuming his very arduous journey. It is certain that Du Lhut did not find things as smooth as it will be for the master plumbers, who start for the same point in a few weeks. Instead of a luxurious steamer, with easy chairs, a good cuisine and a cold bottle handy, Du Lhut had to paddle a canoe or plod through almost trackless wilds on "shank's his mare."

The next visitor was Robertal de Lanone, who happened along some forty-eight years after and built a fort there. Whether this ancient structure still survives, the writer is not in a position to say, but it would not be of great interest anyway as the plumbing systems in those days were, we are led to believe, of a negligible quantity. In 1782, the Northwest Fur Trading Co. established headquarters at Fort William and things began to hum. Furs and skins were sent in from all parts of the west and were then shipped on and sold for use in the centres of civilization. Some plumbers might take a lesson from the methods of the men who handled the furs in those days. It is alleged that they charged more than 10 per cent over and above the cost and that they allowed liberally for "overhead expenses." But how many plumbers do ?



A picturesque view of the Kam river below the Kakabeka Falls.

The port was named "Fort William" in 1805, in honor of the Hon. William McGillivray. An Indian mission was established there in 1846. The first sod of the C. P. R. was turned there in 1875 and the first trans-continental train passed through in 1886. The other mile

posts in the history of Fort William may be mentioned as follows: made Lake Superior terminus of the C.P.R. in 1891; incorporated a town in 1892; made a city in 1907.

Since then Fort William has devoted itself chiefly to growing. It has grown



Cumberland Street, main business thoroughfare of Port Arthur.

so fast that ex-residents find some difficulty in recognizing the place on returning after a few years absence. It is waxing great in an industrial and business sense and it is confidently asserted that the growth of the past will be as nothing to the way that the city will grow in the future. Instead of looking back, the people of Fort William look persistently forward.

City of Port Arthur.

All that has been said with reference to Fort William applies with equal force to Port Arthur. With the same advantages, geographically and otherwise, Port Arthur has also been exceeding the speed limit in its efforts to grow big. That it has succeeded up to date, is evidenced by the towering wheat elevators and the factory smoke stacks which tell in a tangible way the story of the rapid growth of this bustling, hustling city.

A Natural "Cache."

The situation is so good that no one from that section of the country will

here. The Kakabeka Falls, on the Kaministiquia river. Here 20,000 horse power is developed. This is only a small part of the power that could be obtained here.



A panoramic view of the eastern part of Fort William.



A view of Victoria Ave., business street in Fort William.

acknowledge that there is anything to equal it, with the exception, of course, of Fort William. In summing up the advantages which nature has afforded, a writer has very aptly remarked: "Nature, in her march of construction, has left a wonderful 'cache' at the heart of Canada, which the world is only just learning about."

Sheltered by hills on north and west—with the prevailing winds from the land—the city enjoys a delightful climate, both summer and winter. Winter is not unduly severe: in fact, there is open water for eight months and the thermometer seldom registers 20 below.

The rapid increases in the size and importance of the place is shown in the fact that the assessment roll has been practically tripled in four years.

Some of Port Arthur's Industries.

Blast furnace of the Atikokan Iron Company, capacity 200 tons, 100 coke ovens.

Canadian Northern Coal and Ore Docks capable of unloading 600 tons per hour and storing 500,000 tons.

Canadian Northern Elevator, capacity, 7,500,000 bushels. Largest in the world.

Thunder Bay, King's and National Elevators.

Pigeon River Lumber Company Saw and Planing Mill, turning out 20,000,000 feet per annum.

Port Arthur Boiler Works.

Port Arthur Foundry Company.

Port Arthur Machine and Repair Shop.

Port Arthur Marble Works.

Port Arthur Bottling Works.

Port Arthur Steam Laundry.

Marble and Granite and Sandstone Works.

Central Tent and Awning Company.

Port Arthur Sandlime and Brick Co.

Twin City Brick Company.

Concrete Block Manufacturer.

Great Lakes Dredging Company.



The Ogilvie elevator and flour mill, Fort William.



Panoramic view of the western section of Fort William.

Dominion Fish Company.

City Brass and Iron Works.

Sash and Door Factories.

Western Dry Dock and Shipbuilding Company, now under construction, estimated cost \$1,250,000.

The two cities, growing side by side, have now individually attained to positions where they can be ranked as among the most progressive and promising of Canadian cities. Taken together they far outshadow many of the comparatively older points in the eastern points.

Our List of Illustrations.

In the list of illustrations shown two panoramic views of Fort William are included. A fairly good idea of the city is given, but the pictures convey an inadequate conception of the city from the commercial standpoint.

Two excellent views of the Kaministiquia river are given; one where it pours over the Kakabeva Falls, and one some distance below the Falls. Below the waterfall, the river rushes in turgid stream between steep banks, with oc-

casional islets breaking the flow. The course is a winding one, and for beauty of scenery this part of the Kam is unexcelled.

The other views of Fort William show

Victoria Avenue, the principal business street—a fine, wide street, lined with buildings of a good height; and a view of the Ogilvie Elevator and Flour Mill.

A good view is given of the water front at Port Arthur, showing the docks and warehouses, and the splendid facilities afforded for trans-shipping. Cumberland street, main business thoroughfare of Port Arthur is also shown.

Some excellent pictures are shown of Port Arthur, including one of the new C.N.R. hotel.

A new G. T. R. station is to be built at Belleville.

A residence for the manager of the Bank of Montreal, Hamilton, is to be built at a cost of \$20,000.

Tenders for the erection of the hotel at Edmonton for the G.T.P., it is stated, will be called for on July 1st of this year. Plans for the hotel in Winnipeg will be completed in about three weeks.



The fishing industry is an important one to Port Arthur. This gives an idea of the scope of the fishing operations carried on.

Pushing the Sale of Gas Water Heaters

A Good Opportunity for Profit-making—Amount of Gas Consumed an Important Point to Purchaser—Plumber Who Reaches Out for Business in This Line Will Get It.

A good seasonable line which is making money for lots of plumbers, just now, is the gas water heater. With the presence of warmer weather, people generally have out the fires in their coal ranges and furnaces, and they have no convenient means of heating water for bathing and laundry purposes.

The easiest solution of the problem, in towns and cities where gas is available, is by means of gas water heaters, and the selling and installing of these heaters is peculiarly the privilege of the plumber.

There are plenty of people who can afford to purchase gas heaters, but undoubtedly a very large proportion will not take the notion to do so on their own initiative. Some will decide to install one because a neighbor has recently done so and is satisfied. Some will look up a near-by plumber without requiring any outside influence; but by far the majority of prospective buyers, will need to be stirred up, and the plumber who goes out after the business, should find his efforts amply rewarded.

A Great Convenience.

The most potent argument to use with a prospect, is the great convenience afforded by the possession of a gas water heater. The user simply turns on the gas, lights the burner, and in from ten to thirty minutes, he will have plenty of steaming hot water. It is not necessary to keep the heater burning all the time, and, when not actually heating water, it may be turned out, and not consume any fuel at all.

There are several good gas heaters on the market, and every plumber generally handles some particular make which, to his mind, possesses certain points of superiority. Some plumbers make it a point to install any kind of heater that the customer may wish, but it has generally been found advisable to feature either one or two makes, as this plan gives the plumber a chance to build up a trade on the heater that he recommends, and makes him a salesman, as well as a mechanic.

A Feature of the Business.

A. C. Clayton, of Dundas St., Toronto, makes the gas heater the most important feature of his business. Having had a number of years' experience with the Consumers' Gas Co., he has made a special study of gas installation of various kinds, and has devoted his attention very largely, to gas water heaters.

As a result of his study and experience Mr. Clayton has invented a gas water heater which he is now manufacturing

and installing with great success. The Clayton heater differs from most gas water heaters, in that it is constructed on much the same principle as a hot water boiler, the water circulating through cast iron sections, instead of through coiled pipes, as is usually the case.

During the dull winter months, Mr. Clayton made up a considerable supply of his heaters, and, since the opening of the summer season, he has been kept busy installing them. Situated, as he is, adjoining a choice new residential district, his opportunities for securing business are almost unlimited.

Convincing the Prospect.

The man in search of a gas water heater, has one requirement which must be met, above all others. That is, the heater must not consume an extravagant amount of gas. An economical heater is one that is desired by every buyer. The next point to be considered, is the quickness with which the device can heat sufficient water for a bath. There may be some people whose time is not very valuable, but by far the majority of buyers will require that the water shall be heated within from ten to twenty or thirty minutes of the time the gas is lighted.

To carry conviction on these two points oratory alone will be entirely inadequate. It would be almost useless to attempt, purely through a glowing description, and enthusiastic recommendation, to persuade a prospective customer that any particular heater would prove the most economical on gas and heat the water with least delay. The prospect would likely hear the same story everywhere he went, and his natural inclination would be to say: "You'll have to show me."

This was the problem that Mr. Clayton had to face even more strenuously than most other plumbers, because he was marketing a product of his own, untried and without a reputation. Some means had to be devised, for convincing the public that his gas heater was all he claimed for it.

Watching the Wheels go Round.

The only practical way was to show a heater in actual operation. So Mr. Clayton rigged up a domestic boiler, in his office, connected it with the city water supply, and installed one of his gas water heaters, connecting a gas meter in plain sight, so that prospects could watch "the wheels go round," and see with their own eyes, how much gas was being consumed.

This scheme is working out nicely.

When a prospect comes into the office to talk gas heater, Mr. Clayton simply lights the gas, takes out his watch, and he and the prospect time the meter in registering two cubic feet of gas. If it takes 7 minutes to burn 2 feet of gas, it will mean a consumption per hour, of 17 feet. Gas in Toronto, is charged at 70 cents per thousand, so that it would cost 1.19 cents to burn the heater for an hour.

A mark is made on the domestic boiler indicating how much of the water will have to heat before there is sufficient for a bath. The time taken to heat this much water, is carefully noted, and the customer then knows for certain, all the information he wishes, regarding the heater—how long it takes to heat the water, how much gas the heater consumes in doing so, and finally, the exact cost of heating sufficient water for a bath. It is then only a matter of showing the customer that the services performed by the gas heater, are worth the price asked for it.

A Good Side-line.

While gas water heaters constitute practically the leading line with Mr. Clayton, plumbers elsewhere, who are specializing in other directions, will find in them, a splendid side line. There is good profit in handling them, and they very often pave the way to important contracts in plumbing and steamfitting, as well as to a regular trade in repairs and jobbing work.

The average price for a gas water heater installation, is from \$12 to \$15, though for special purposes, there are many quite high priced devices. As a rule, the work can be done quickly, and with very little trouble, so that plumbers who are located in natural or artificial gas towns will find it a splendid way of increasing their income, to take up a good moderate priced gas water heater, and push for business.

The First Methodist Church, Hamilton, Ont., will build a new church on the old site.

The Sisters of Providence have agreed to build a \$43,000 hospital at Hull, Que.

A new school, to cost about \$30,000, will be erected at Kindersley, Sask., this summer.

Plans for the new Masonic Temple at London have been accepted. The cost is estimated at \$45,000.

Tenders have been called for extensive additions to the Engineers' Club, Montreal.



POINTS ON HEATING

by
CHAS. H. DENISON



CHAPTER 8.

The average guarantee on the house heating boiler is a mighty slim and insecure proposition upon which to bank for the success of the job. So when you get hold of a make of boilers that give, in your hands, good and most successful results, boilers that you can tell nearly every time just about where you are at, do not be in too great haste to "switch" to some other make just because some clever boiler salesman arrives on the scene all "heat up" with new facts and can sell you a boiler for considerably less money, the same that **YOU** can sell for less money and thus underbid the other fellow. Of course there are certain points about some boilers that make them more effective than others that are designed to render the same services. The circulation, for instance; the manner in which the boiler is made to-gather and various other points might be given. The average fitter, however, has got to have a boiler which will give good results from the first kick off and keep on giving good results and just about run itself into the bargain.

Now I well recollect, some years ago, an incident that happened in a shop in which I happened to be working. The master had a mighty good name as a most successful installment man of steam heating apparatus. I said "installment" for that is the way in which he got his pay on many jobs. For several years this master had been purchasing his boilers off the "X.Y.Z." Company, a concern located in another part of the country. These boilers he had installed in the city in which he lived and in the surrounding territory and had always secured most excellent results. They were, however, somewhat high in price as compared with certain other makes and the master sometimes lost out on several competitive bids as his figures were "high." Well, you all know just how that makes one feel and the more so when you are certain that some one else is not giving the public the same good service that you are rendering. So the time and the occasion were just right when one day, along comes a certain salesman for the firm of "P.D.Q. & Co." Man, but he was a swell "gink."

that same party. He had plenty of the "dough" too and spent it without batting an eyelid, and was mighty strong on the confidential poise. He got into the old man's good graces and after awhile they were the chummiest ever.

This fellow didn't seem at all anxious to sell boilers. What he was after was to do the old man a favor and nail him for a friend. Well, they got talking and swapping lies and at length the old man pulled out several plans that he had been figuring on and shoved them across to the salesman who proceeded to get busy looking them over. Now don't you suppose for a moment that the salesman did not know his business. He did. He took those plans, figured out the boiler sizes about as quick as Casey ever made a home run, and then looked up at the old man.

"Boiler on this Jones job costs you \$127.50?" he asked of the old man. "Well, about that," he admitted, reluctantly. "How many of these makes of boilers have you set in the past five years?" next asked the salesman. The old man had to stop and think. Finally, he "guessed that it was something over a hundred." Then our friend of the road got busy. He showed just what he could do in the way of prices, how much less he could furnish a boiler that would do the work and what it would have amounted to in the course of five years. He hore on heavy on the last fact and it sure caught the old man's attention. Catch most anybody's, wouldn't it? \$3,000 or \$4,000 isn't any sum to be sneezed at in the business and the more so when it seems to be borne upon you that you have as good as given it away to some one else.

The final result of it all was that the old man ordered a boiler for the Jones' job. Ordered it, in fact, and about all he had to show what it would do was the salesman's word and a printed statement to the effect that the boiler wouldn't shed its horns in the spring of the year. The boiler came, after awhile, and we got it set up, a pillar of dark and lightness it looked like. So we piped it to the Jones' job and when all was ready the job was fired up with fuel and great expectations. Did "she" make steam? "Sure, Mike." Almost enough to completely fill two radiators and there

were ten only on the job. We were hot enough, stoking that cussed boiler; the old man he was—well, did you ever listen to a real mad steamfitter when he gets properly "het up" and really interested in his subject? Well that's just what he said and then some.

The result was that, in spite of all our urging, pampering and petting, that boiler simply would not carry the job. It had to be removed and the original boiler that the old man figured on was substituted and performed the work in a manner most satisfactory. You would not believe that to-day, after all the mistakes that have been made, all the missionary work that has been done by the writers and the trade press, that anyone would be foolish enough to attempt to make use of unreliable or untrustworthy boilers, but such is the case and in almost every instance if the party gets stung, he has only himself to thank for it as there is plenty of reliable information lying around that can be had at a nominal price and merely the time of reading it, which will prevent any such mistakes.

Taking the whole matter into consideration, I presume that the whole experiment cost the old man about \$75.00 in cash, not to mention any damages for his wounded feelings nor loss of prestige with his customer. These experiments do not pay. It pays, rather, to KNOW, and that is where many a fitter and master falls down. Take, for instance, such an (apparently simple) object as a two-inch steam pipe. Now, if I were to ask of an assemblage of fitters just how many feet of radiation that this pipe would supply, I would get hardly two answers. I might limit the distance of the main, state the height of the water line and also the depth of the cellar, and I would get many varving answers again. I might also give the number of turns and fittings on the main, and here some would say that it made no difference whatever (this latter point) while others would still be making various different "allowances," while a few might get the data right. All of which points to the fact that there is no standard to go by, and that the sooner we can arrive at one, the better will it be for those of us who are interested in the business.



The Question Box



Subscribers are Urged to Send Questions to be Answered, or to Comment on Letters Published. Descriptions of Jobs Done or Shop Kinks are Also Invited.

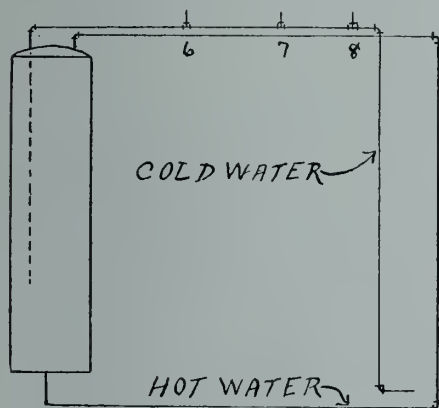
THE CIRCULATION PIPE.

Editor Plumber and Steamfitter,—In the issue of May 1, Fig. 2, in the questions and answers department, I would like to ask where the hot water pipes are taken off to the various fixtures as I did not observe any points so marked?

Toronto, May 19.

C. J. R.

It was not intended to put them in, the matter being left to the supposed



accommodations of the (or any) installation. The idea in this drawing was to give a general idea of a small circulation and to show, by comparison, one that was not right as was shown by figure one published at that time. However, the point is well taken and some connections might as well have been put in, and the writer will remember same in some future drawings.—D. C. H.

USING WATER IN THE DITCH.

Editor Plumber and Steamfitter,—After the pipe has been run in the ditch and it is desired to put back the dirt, is it necessary to use water to help it getting all the dirt back?

St. Thomas, May 22.

41.

It is not necessary and further is quite undesirable. We know that, in saying this we will probably have some that will say, "Oh, the water is the easiest way." A ditch filled in by the aid of water will always slump afterwards and require further filling, whereas if the dirt be tamped back in a dry state, all the dirt can be got back and placed there to stay and there will be

no after cave-ins to bother and perhaps cause a law suit. It will take a little more time to tamp the dirt in dry, but it might not cost so much, at that, as the other way of doing the work.—D. C. H.

THE PRESSURE ON THE STEAM GAUGE.

Editor Plumber and Steamfitter,—Suppose that one gets up steam on the steam boiler to the extent of two lbs., which so shows on the gauge. Is that the exact amount of pressure? If not, then why?

Montreal, May 16.

X.

It is not. The pressure would be the two pounds added to the atmospheric pressure of the place where the boiler was located. At the level of the sea, this atmospheric pressure is some 14.7 pounds per square inch. So, if the boiler happened to be at that level the pressure would be 16.7 pounds.—D. C. H.

THAT COLD WATER TUBE ONCE MORE.

Editor Plumber and Steamfitter,—I see in the issue of May 15th, that a gentleman has made the statement that if a hole punched in the cold water tube with a sharp punch that one need never have any fear of siphonage. Evidently the gentleman has never had much experience with some kinds of river waters, the like of which will deposit a sediment $\frac{1}{2}$ -in. thick on the bottom of a tank in a very short time. I have seen this hole in the cold water tube get stopped up, but do not state that it is the usual thing for it so to do. The safer practice, where one has doubts as to the action of the water or its purity, is to put the tube in the boiler and not put any hole in it at all, guarding against the siphonage by using a vacuum valve installed on the supply at the highest point of the siphon's leg.—D. C. H.

MANUFACTURING REPRESENTATIVES.

There will be a large attendance at the convention of representatives of manufacturers and supply houses. In many cases, arrangements have already been

made but other companies have not yet appointed their representatives.

Among those who are known at the present time to be going are:

Pease Foundry Co.—"Jeff" Hunter.

Anthes Foundry Co.—L. L. Anthes.

Dart Union Co.—C. P. Archibald.

Dominion Radiator Co.—Manager P. McMichael will probably attend, accompanied by W. C. Sellers.

Guerney Foundry Co.—D. Day and C. E. Oldacre.

Macdonald & Sons.—A. L. Macdonald.

NEW SEWERAGE BY-LAW.

Ottawa, May.—In order to provide for better sanitary arrangements where many citizens for different reasons are and always will be unable to provide sanitary plumbing, the board of health have prepared a by-law and last night at a special meeting, the board of control considered the by-law, which provides for a sewage system for houses where sewer connections cannot be made.

Dr. W. T. Shirreff, M.H.O., was present for the first time in his official capacity. He wanted to know how long it would be before there was a water supply in all sections of the city to provide for the disposal of sewage.

Mayor Hopewell said there were many houses too small for allowing of the installation of closets, even though the drains and water were available.

Controller Hinchy thought it was a very important question and suggested that Dr. Shirreff write other cities as to how they deal with such cases.

Controller Hastey asked where the line was to be drawn and the Mayor informed him that the city was up against a difficult problem and it must be faced sooner or later. There are hundreds of dry earth and outside closets in the city and the controllers as well as members of the board of health and M.H.O. are anxious to do away with them so far as is possible.

Where it is impossible to place a closet in a house, Dr. Shirreff believes some method of connecting the water pipes from the houses to the outbuilding outside can be devised.

The by-law recommended by the board of health was referred to Dr. Shirreff, who will take the matter up and report to the board of control.

Study the Specifications and Plans Carefully

Losses May be Avoided—An Instance Quoted Where Toronto Master Plumber had a Close Call—Know Just What You are Expected to.

BEFORE accepting a contract it is well to know just exactly what you are signing up for. Cases without number are known where master plumbers have experienced heavy losses, through not thoroughly understanding the meaning of the specifications. It is well to scan over the plans carefully before figuring on any job, and to weigh each clause and even each word. It is quite possible that in the first cursory examination, a meaning may be put on a certain phrase which is afterward found to be entirely erroneous.

Here is a case in point. Not so long ago, a Toronto master plumber took on a contract for the plumbing and lighting of a three storey building, with a store on the ground floor and two flats above. The specifications that he, the master plumber, drew up contained the following reference to lighting:

"I agree to instal 1 inch gas connection and four outlets for gas only."

He figured the price of the contract on that basis. But the architect's specifications contained the following clause:

"— gas pipe throughout graded in the usual way. Burners where marked in red thus. (There were no red marks on the plans) and in each kitchen for gas stove and gas in parlor."

Now every man who has ever made a gas connection in a house knows that there is a big difference between an "outlet" and a "burner." The plumber and the architect were both probably aware of the difference, but the specifications were left that way. The plumber went to work with the intention of just putting in the outlet; the architect thought he was going to finish the job and put in burners wherever necessary in the building.

When the contract was finished, the architect found that no burners had been put in and he promptly notified the plumber to "get busy." The plumber looked over the papers and found, to his surprise, that he was supposed to put in burners where marked on the plans. Scrutiny of the plans failed to reveal any red marks, so he asked the architect what he meant by it.

"The plans are not marked," explained the latter. "But you are supposed to know where the lights would go."

"Am I a mind reader?" demanded the M. P. "If you did not put windows or drains in the plans, would I be expected to guess where they went?"

"Well, you put in the lights anyway," asserted the architect. "Your contract calls for it."

The plumber accordingly looked over the building and decided that the cost of this extra work would be roughly speaking, about \$30. The profit on the contract was—well, it is hardly necessary to go into figures that way, but the profit would have been just about wiped out. This set him thinking pretty hard.

He looked over the papers again and found that the architect had made no mention of outlets. Now four outlets had been put in—two for kitchen ranges and two for gas grates. The architect just mentioned burners and it seemed reasonable that he had meant outlets. Basing on this, the plumber spent \$2 for a legal letter and decided to fight it out.

Up to time of writing, he has not heard anything further from the other

side and concludes that his version has been accepted.

Consider Papers Carefully.

This points the necessity of carefully figuring out everything before signing up. Had the master plumber in question gone over the papers thoroughly, he would have noted the discrepancy and called the architect's attention to it. Had the latter insisted on the contract covering gas burners for every room, the plumber would then have been in a position to set a higher price. As it was, he ran the danger of being forced to do work at a price figured without reckoning on that contingency.

A dozen other cases might be mentioned all bearing on the same point. It is, unfortunately, a frequent occurrence for plumbers to get an erroneous idea of what they are expected to do and to make their price on that mistaken conception. This invariably leads to losses. Prices are generally figured so closely that an "extra" overlooked in the first instance, will almost certainly wipe out the profit.

HUMOR IN ADVERTISING.

Advertisers frequently strive after humor in preparing their announcements. A really humorous ad. is certain to be effective but a poor attempt is a good deal worse than nothing at all.

Plumbers do not often stray from the path of straight, common sense, business

plumbing inspection. In the first instance, the inspector is ordering Mr. Dinosaur to put his drains in order and abate the smells which seem to be assailing his (the inspector's) nasal organ. By way of contrast the spick and span inspector of to-day is shown glibly passing the work in a modern house.

The second illustration is a reproduc-



talk in their advertising, but once in a while an ingenious fellow does glide off into humorous efforts. Some good things have been produced in this way. The accompanying sketches, reproduced from the Ironmonger, were sent out on post cards by two old country plumbing firms. The first is one of several designs sent out by John Jones, of Chelsea, London, S.W. It represents the difference between modern and prehistoric

tion of an ad. sent out by A. Selden & Son, Hammersmith. It is also reminiscent of the "good old days." The Selden express waggon is in such an extreme hurry to complete its rounds that it has to chuck out the goods at each but as it goes along without stopping—a practice which bids fair to prove dangerous for the worthy miller and baker, who has ordered a grindstone and is outside waiting for it.



Humorous Advertisements Issued on Blotter (See Last Page.)

Making Patterns for the Tin Shop

How to Draw Pattern for Y Joint, Pipes Being all of the Same Diameter.

By Wm. J. Finnigan.

First describe a circle of the required diameter as Fig. 1, then extend down the lines A—C and B—D, from the points Nos. 1 and 9, shown on Fig. 1, and draw an elevation of the intersection of the three pipes as Fig. 4. The point E is the intersection of the centre lines of each pipe. Divide the bottom half of circle Fig. 1 into eight equal parts and mark from Nos. 1 to 9 as shown, extending the lines down from these points until they intersect with lines C—E and E—D.

Describe a half circle on the line G—H,

the same diameter as Fig. 1, and divide this into the same number of equal parts as Fig. 1. Extend up the lines from Nos. 1 to 5 until they intersect with lines F—E. Extend the line G—H up to J—K in Fig. 2, and set off twice the number of spaces shown in the bottom of Fig. 1, commencing at J, numbering up to 9, and then down again to 1 as shown. Draw lines through these points as shown at right angles to line J—K. On line E—D extend the points from Nos. 5 to 9, which have been brought down from Fig. 1, over to Fig.

2, running parallel with line J—K, and where No. 5 intersects with line 5 will give the highest point in Fig. 2. Extend in like manner the lines from Nos. 1 to 5 which intersect line F—E, and, where the corresponding numbers in Fig. 2 intersect these lines, will give the points of the profile of pattern.

Draw a line through these points as shown. Fig. 2 is the exact pattern required for either of the lower pipes. For the top pattern extend the lines A—B over to M—N in Fig. 3, and set off the same number of spaces as shown in the bottom of Fig. 1, and draw lines through these points as shown, at right angles to line M—N. As lines C—E and E—D are the same angle and the same length only half of this pattern will be necessary. Extend the lines from Nos. 1 to 5 which intersect lines C—E over to Fig. 3. No. 1 will intersect with lines Nos. 1 and 9; No. 2 will intersect with lines Nos. 2 and 8; No. 3 will intersect with lines No. 3 and 7; No. 4 will intersect with lines Nos. 4 and 6, and No. 5 will intersect with No. 5. Draw a line through these points as shown. This will give only half of the required pattern, the other half being exactly the same.

Plans are in preparation for six new schools in Calgary.

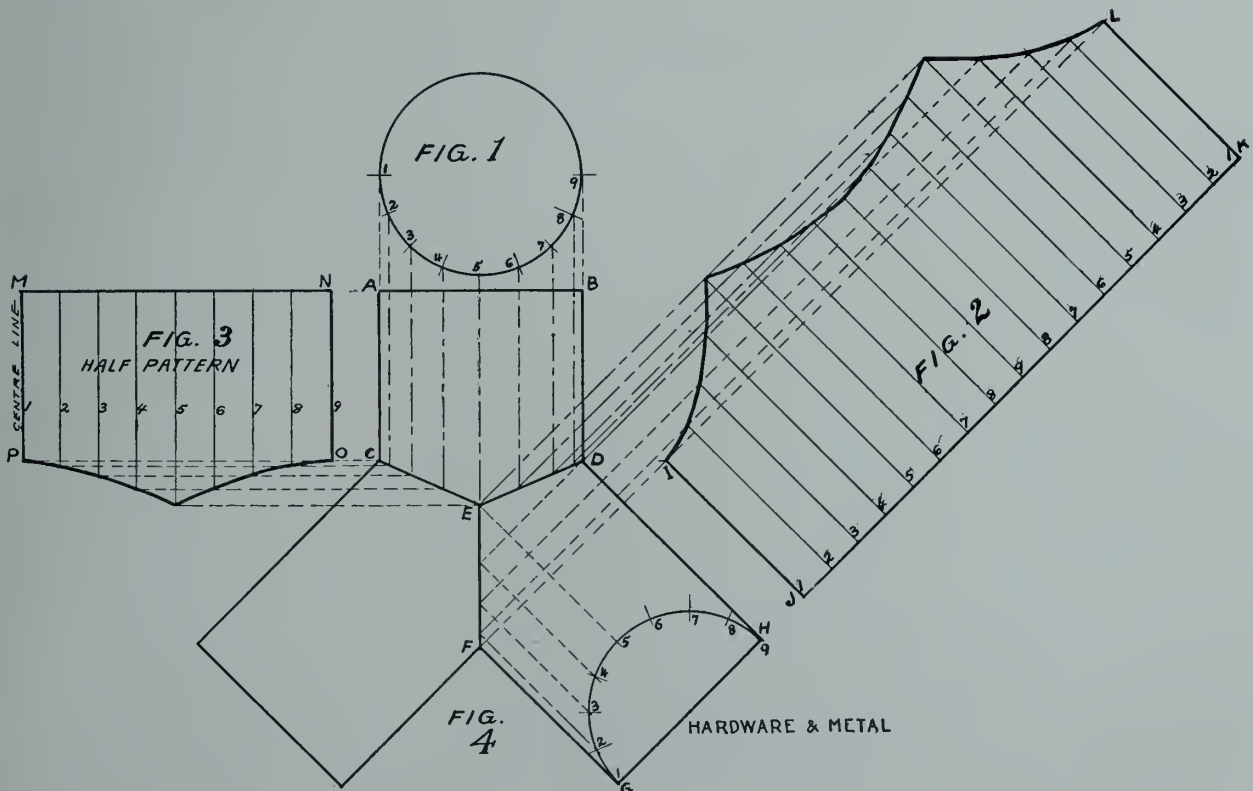
The plans for the new Barrie, Ont., Collegiate have been closed.

A new school to cost \$12,000 will be erected at Herbert, Sask.

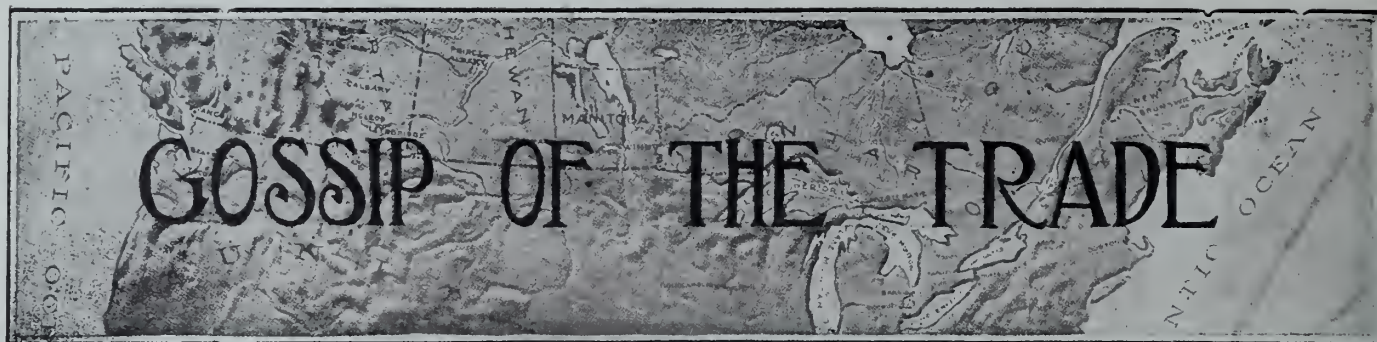
A new fire hall, to cost \$12,000, is to be erected at Collingwood, Ont.

The Y. M. C. A. campaign at Brantford closed after \$117,000 had been raised.

The Starland Picture House Co. may build a vaudeville and picture house to cost about \$100,000.



Pattern for Y Joint, Pipes being of same Diameter.



New Inspector.

Robert G. Leaman has been appointed plumbing inspector in the Toronto Medical Health Department.

Was in Pittsburg.

L. L. Anthes, of the Anthes Foundry Co., Toronto, was in Pittsburg last week, attending the convention of foundrymen.

To Concentrate.

A despatch from Guelph hints at the possibility of the Page-Hersey Co. concentrating their manufacturing operations at Welland.

A Large Plant.

Work has been commenced on the new plant of the Steel and Radiation at St. Catharines, Ont. The plans call for a structure of exceptional size.

Partnership Dissolved.

Andrew Rodgers and John E. Gibson, plumbers and steamfitters, Hamilton, Ont., have dissolved partnership. The former will continue the business, it is understood.

Selling Out Stock.

The Kamloops Plumbing and Heating Co., successors to H. Shotton, are conducting a large sale of electric light fixtures. The old stock is being offered at reduced prices.

Partnership Dissolved.

Oswald J. Deegan and Edward W. Howe, plumbers and steamfitters, Port Arthur, have dissolved partnership and the former is continuing in business there.

Plumbing Inspector.

A plumbing inspector is to be appointed at Moose Jaw, Sask. Applications are being received for the office. It is understood that a large number have already applied.

Starting in Business.

R. J. Lunn, of Portage La Prairie, has arrived at Dauphin, Man., and intends to start up an extensive plumbing and heating business in the building occupied by the Massey-Harris Co.

Are Getting Settled.

The National Plumbing Supply Co. are now getting pretty well settled in their

new building at 115-117-119 Adelaide St. West, Toronto. They expect to have their showrooms completed shortly.

Starts in Fergus.

R. A. Curtiss has opened up a shop in Fergus. He intends to engage in an extensive line of repair work, for in addition to plumbing and heating, he will repair pumps and do general machine repairing.

Going Into Hardware.

H. Matthews has left Phoenix, B.C., after having closed out his plumbing business there. He has gone to Calgary where he intends going into the hardware business with L. Y. Birnie, also formerly of Phoenix.

Spoke Before Union.

Alphonse Verville, M.P., labor member, delivered an address on the evening of May 23 before the Montreal Plumbers' Union, the theme of his address being the work accomplished in the House of Commons during the last session.

Picnic Committee.

The committee chosen by the Ottawa Union to perfect the arrangements for the annual picnic is composed of the following: F. Quinn, H. Mullen, E. Smith, J. Pollock, J. Cassidy, A. Stevenson, C. Smith, J. Cinq Mars, J. Barrett and the president, Wm. Kennedy.

The Dog Bit All Right.

Frank Rigby, a Toronto plumber, has found out which end to believe when a dog barks and wags its tail at the same time. He went up to the house of Eli Black, 67 Teraulay Street, and found a dog on guard. The owner told him that the dog was friendly and would not bite but when Frank tried to enter the canine bit him on the arm and leg.

By-law Held Over.

At the last meeting of the Montreal council, consideration was given to the "stopcock by-law." Ald. Leclaire made a sharply-worded attack upon it, saying he considered it would cost the city more in the end than the system now in use. Though several suggestions were made to meet the objections, it was found advisable to hold the by-law over once more.

Comfort Stations.

It is also purposed to institute comfort stations in different sections of the city of St. John, N.B., and this matter is also being taken up by the common council, which has appointed a committee to look into the methods employed in this connection elsewhere, and the cost of building.

Prominence to Tinshop.

W. R. and A. C. Burnet, of Galt, have bought the hardware and tinsmithing business of Wm. Hopkins, Saskatoon. They are planning material alterations in the arrangement of the premises. Among these will be the use of the entire front store as a salesroom this being accomplished by the increase in storeroom space provided by the addition now building at the back, which will also permit more prominence being given to the tinsmithing department.

Will Have Large Plant.

The tenders have not yet been let for the new plumbing warehouse and showrooms of the James Robertson Co., to be built at the corner of Spadina Ave. and Sullivan St., Toronto. It is understood, however, that the matter will soon be closed up and the work of construction started. The new building will have more floor space than the present Robertson building on King St., which is used for the manufacture of paint, as well as for plumbing supplies. A separate building is to be erected for the paint end of the business.

Contract Went Outside.

Toronto master plumbers are complaining that American firms are underbidding them. The plumbing in the new Bank of Toronto building has been awarded to a Boston firm at \$9,000 and it is said that the heating contract is also to be awarded outside. The figures of the American firm were said to be considerably below those submitted by the Canadians tendering and they in turn say that they had cut the price as low as they could in reason go. One Toronto plumber declares that the invasion is due to slackness in the American cities.

Central Heating Plant.

Will Regina have a central heating plant installed, similar to that in Brandon? City Commissioner McPherson has advised the board of trade that the matter will engage the attention of the city council in the course of the year. The board of trade investigated the movement for a Regina central heating plant, and by resolution informed the civic authorities of the apparent advantages of such a system. The only reason for delay in installing such a system, according to City Commissioner McPherson was that the city had enough work on hand now.

Establish a Branch.

The Reliable Plumbing Co., Vancouver, have established a branch business at Penticton. The firm is made up of W. H. Murfitt, C. W. Murfitt and R. Balmer. The Murfitt brothers were formerly in business in London, England, but have had four years experience in Canada. Mr. Balmer is a man of wide business experience. They engage in plumbing, steam and hot water heating and electrical work. The branch at Penticton, which has been open now for two months is under charge of W. H. Murfitt, the other two members of the firm remaining in Vancouver to look after that end of the business.

Baseball Season Starts.

The Toronto master plumbers have already started the baseball season and are practicing on Saturday afternoons at "The Pines," a big field at the corner of Dundas and Bloor. They will shortly play the manufacturers and travelers and have two other dates under way. Among the candidates for the team are Charlie Hicks, Harry Hicks, Tom Maxwell, Dan Glynn, Frankland, MacKay, Needham, Smyth, Stevens, Cooper, Shannon, Pepper, Jack Wright, Dinny Mullen, Passmore, Schultz, Mimms, Fullerton, Dave Menzies, Price, Smith, Seager, Gentle, Pat Hayes. A number of others are expected to come forward as the season progresses.

Business is Brisk.

Vancouver, May—The plumbing business in Vancouver is in good shape, despite the labor troubles that have affected some of the trades. There is more building going on this year than ever, and necessarily the plumber comes in for his share of the activity.

In Nanaimo a busy summer is anticipated, owing to the installation of a sewerage system. Two new firms recently started in business there, Messrs. Hayward and Dodds, and Messrs. S. Atkinson and J. S. Hall, the latter under the firm name of The Modern Plumbing and Heating Company. Mr. Atkinson has had fifteen years' experience in Win-

nipeg, Calgary, Lethbridge and other western cities.

A Brass Merger.

The rumor that negotiations were pending for the formation of a merger among certain Canadian brass companies has been again revived.

Lloyd James, manager of the Corporation Agencies, Ltd., Montreal, has been in London, Ont., and according to reports from that place, his object has been the furthering of arrangements toward that end.

Over a year ago the project was first broached. At that time negotiations were carried to such a stage that a charter was secured but the arrangement was never finally closed. Since that time, the rumor has been revived at intervals.

It is only a fortnight since the announcement was made of the merging of Somerville, Ltd., and the General Brass Co., into the United Brass and Lead Co.

Just what firms would probably be included in any negotiations for a brass merger, it is impossible at present to say.

Locked Them Up.

The following story which comes from Nelson, B.C., tells of an amusing incident in which three plumbers figured. Some time ago a man named Van Schmidt, rented a suite of rooms for a barber shop and bathing establishment, getting supplies from D. J. Robertson, a furniture dealer, and the B. C. Plumbing Co. Fixtures were put in and liens filed in the usual way. Schmidt left finally and it is said that Robertson suggested to the B.C. Plumbing Co. that between them they should rent the

rooms for a short period and while in the position of tenants exercise their right to take away the fixtures. The plumbers, however, considered that under their lien they could remove their part of the fixtures whenever they saw fit anyway.

The furniture man adhered to his view of it, paid down \$90 as rent for the rooms and sent up some men to take away the fixtures. Finding that the doors were open, the plumbing company considered that a splendid opportunity had thus been presented to secure their fixtures and sent three men up. Finding them at work, Robertson secured three yale locks at a nearby hardware store and locked the plumbers inside.

It is said that the men were kept locked up for several hours before they managed to pry their way out. They were an infuriated trio and they vowed to repay the practical joke in kind.

A COMMODIOUS OFFICE.

The accompanying illustration shows E. L. Martin of Calgary in his handsomely appointed office on the sixth floor of the Grain Exchange Building. Mr. Martin is one of the most progressive and prosperous plumbers in the prairie city. He conducts the business end from the office, and has a warehouse and showroom elsewhere. This gives a pretty good idea of the importance attached by Mr. Martin to the business end. The master plumber who is content to carry his stock in a dingy little shop and let the books and business matters look after themselves, would experience some measure of surprise if he were to take the elevator up to E. L. Martin's offices



E. L. Martin, Calgary, in his Office in the Grain Exchange Building.

News Briefs.

T. Tessier, tinsmith, has started in business at Starbuck, Man.

Bert Parnell, Peterboro, has taken a position with a plumbing firm at North Bay.

N. Groulx, Ottawa, has taken out a traveling card and intends to locate at Regina.

John Burke, Kingston, is completing two large plumbing contracts for Simmons Bros.

Cassidy & Coolen have started a plumbing and machine shop business at Wainwright, Alta.

John Limerick, formerly in the plumbing business in Fredericton, N.B., has been obliged to undergo an operation at Victoria Hospital, that city.

James R. Carruth, who recently left Renfrew, Ont., for Calgary, writes home that he secured a position with a plumbing firm there the first day.

The Calgary Stove and Furnace Co. are negotiating with the Calgary city council in connection with the establishment of a plant in that city.

Bernhardt & Gies, Preston, Ont., are installing a new pipe threading machine, in their plumbing department. They expect to have lots of work in that line, during the season.

FIRST SANITARY ENGINEER

The name "Sanitary and Heating Engineer" is finding favor rapidly. Recently James L. Bloomer, a master plumber at 223 Waverley Road, Toronto, had occasion to repaint his wagon and it occurred to him that he would fall in line with the progressive movement. Accordingly, he had the name "Sanitary engineer" painted on the wagon in large letters. He enjoys, therefore, the distinction of being about the first master plumber in Ontario to embrace the new name. The accompanying illustration shows the outfit with "Jimmie" Bloomer himself on the seat.

Members of Calgary Union Hold First Banquet

Speakers Show the Prosperous Condition of the Trade in Calgary at the Present Time—Friendly Relations With Master Plumbers Commented Upon.

Calgary, May 13.—The first annual banquet was held by Local Union No. 496, of the United Association of Journeymen Plumbers, Gasfitters, Steamfitters and Steamfitter's Helpers. It was held in the Grand Union Hotel and was a most decided success, upward of 200 members being present.

A splendid bill-of-fare had been prepared and the company assembled around the festive board, did full justice. After this interesting part of the evening's program had been completed, President George Henderson, who acted as chairman and toast master, called the company to order and proposed the health of His Majesty the King.

"The United Association" was the next toast, proposed by J. W. Bruce, grand organizer. He carried greetings to the new union and expressed himself as delighted with the amicable relations existing between the master plumbers and the men in Calgary.

Good to the Trade.

Mayor Mitchell responded to the toast "The City of Calgary." He was in a happy mood and expressed his pleasure at being present. He noticed with satisfaction the absence of labor troubles in Calgary. The city had been good to the plumbing trade, said the mayor, and instanced the fact that already 100 miles of water mains had been put down and an equal length of sewer mains. He assured J. W. Bruce, that he would have to travel many miles to find a more sanitary city than Calgary.

All Would Ride.

President E. J. Young responded to the toast to the "Master Plumbers' Association." Among other things he stated that the present year was the

first that the master plumbers had not been confronted with a strike. In optimistic vein he pictured the rosy future for the plumbers of Calgary, predicting that in time all would be riding bicycles. (Voice—How about automobiles?)

Study the Trade.

Study of the hard and unremitting order was advocated by E. Fletcher, city plumbing inspector, who responded to "City Board of Health." He desired to impress on the men that they should not be satisfied with passing their examinations, but that they should continue to make a study of the trade.

Everybody sang the old favorite, "For he's a Jolly Good Fellow," when Chas. E. Good rose to speak to the toast "Board of Examiners." Mr. Good expressed the pleasure he felt at being called a "jolly good fellow," for he had a "hunch" that sometimes he, as well as the other members, were called other names, vastly different.

The Musical Programme.

The toast list was plentifully interspersed and enlivened by musical numbers by the 103rd Regiment orchestra and by vocal and instrumental selection by Messrs. Marsh, Marlow and Gledhill. Not the least of the night's enjoyment was supplied by a male quintette of the Sheffield Choir, consisting of Horace Bennett, W. K. Moore, George A. Varley, Fred Haig and J. T. Robinson.

Two new schools will be erected at Owen Sound.

It has been decided to proceed at once with the erection of the main building of the proposed Ladies' College at Red Deer, Alta., to cost about \$65,000.



Changes in Plumbing By-law are Advocated

City Architect at London Recommends That Inspector be Appointed, and That a Board of Examiners be Established—Registration of Plumbers Recommended Also.

London, Ont., May—The question of the appointment of a plumbing inspector here is still pending. It seems now to be practically certain, however, that an inspector will be appointed and further that the plumbing by-law will be very radically amended.

At the last meeting of Committee No. 3, City Architect Nutter reported, recommending that an inspector be appointed. His report read as follows:—

1. The present by-law governing the inspection of plumbing be repealed, and a more up-to-date by-law introduced.

2. That an examining board to examine plumbers be formed to consist of the building inspector, the city engineer and a master plumber of ten years' experience.

3. That all practicing plumbers be examined and registered, master plumbers as well as journeymen plumbers, and certificates be issued to all qualifying.

4. That the fees be as follows: Examination \$1, registration master plumber \$10, journeyman \$5, annual license fees, master plumber \$5, journeyman \$2.

5. That plans of all new work or alterations of existing work be filed in the department, and that permits for all such work be issued by the department.

6. That no fee be charged for permits, but that a fee for each examination and test of the work be charged. If other tests be necessary, owing to defective work, a fee of \$1.25 should be charged for the first test, \$1.50 for the second test, and so on until the work is satisfactory. The object of this is to penalize bad work, and reduce, if possible, the number of examinations and tests required.

7. That the permits be issued by the building inspector, and that an assistant building inspector be appointed, whose duties would be to act as plumbing inspector, in particular, and assist in the inspection of buildings generally.

The Probable Cost.

Mr. Nutter reported verbally that the fees from the office the first year would be about \$535 and for subsequent years, \$660.

It was finally decided to ask Mr. Nutter to make a report on the costs connected with the office and to submit same to the committee. Until this report is received nothing definite will be done.

THE METAL SITUATION.

Toronto, May 26, 1911.—The feature of this week's metal market is the stronger position of tin. The English syndicate who have dominated the situation for some time past are said to have the

visible supply cornered until the end of June, at least, and they have deemed the time opportune for the advance in price which they would no doubt have forced several weeks ago had consumption been at all large.

Latest advices from the Old Country are to the effect that tin has advanced £6 per ton, as a result of which local metal merchants have raised quotations 1 cent per pound.

The primary metal markets all show greater strength this week. The commercial situation generally is clearing and the buying which has been withheld for so long is expected to materialize in the very near future. Jobbers here are quite hopeful regarding business for the last half of the year. This is largely due to the fact that, with the Standard Oil case out of the way, business in the United States is picking up, and Canadian business may not longer be threatened by the stagnation across the line, which has clouded the situation here of late.

UNIFORM FOR INSPECTORS.

There is a possibility that before many months pass all inspectors in the service of the District of Columbia Government will be required to don a uniform indicative of their respective po-

sitions. This matter has been taken under consideration by the authorities through a committee comprising the head of each department having under them men in the field, it having been brought about by the many impositions on the public by men claiming to be inspectors of plumbing, and others, and gaining admission to a premises with the sole purpose in view of robbing or performing other acts in violation of the laws.

As a matter of fact the force in the office of the plumbing inspectors in many of the larger cities are at present uniformed, and it has been found of material advantage in the carrying on of their work.

A MODEL INSTALLATION.

The accompanying illustration shows a bathroom installed in the home of Frank Minshull, 79 Witlow Ave., Toronto, by A. F. Passmore, who also had the heating contract for the house.

The bathroom equipment, while not ornate, was highly expensive and the room presents a very handsome appearance. The lavatory was a special design in marble made and exhibited by the James Robertson Co., at the Toronto Exhibition of 1910. The equipment includes a large sized tub, a cabinet for the wall and mirror.

The equipment is judged to be one of the most complete and artistic installed in Toronto. The neat design of the wall tiling adds very considerably to the handsome appearance of the room.



PLUMBING AND HEATING MARKETS

MONTREAL.

Montreal, May 29.—With the building trades settled down to their summer work, the volume of plumbing work swells with the increase in construction operations. In the newer parts of the city where dwellings are going up a large part of the demand is felt. In addition, orders from different parts of the country and the smaller adjoining towns are quite numerous. On the whole business is reported on a solid basis and the prospects that were looked for are apparently presenting themselves to the entire satisfaction of the trade. The outlook for the summer is bright, and is entirely welcome to the trade. There is no particular price change and the demand covers all the general lines.

Boilers and Radiators.—The business in boilers and radiators is reported highly satisfactory. Jobbers fail to speak of the present volume of trade in anything but pleased tones. Naturally the present building work is creating a good demand for heating apparatus, and the kindred supplies. It is fully expected that this condition will hold more or less firmly throughout the summer.

Soil Pipe.—It might be said of pipe in general that there is a brisk demand. Soil pipe has a large share of the trade now that outdoor work is in full swing. Discounts quoted locally remain unchanged. For medium and heavy pipe up to 6 in., 70 and 10; 7 and 8 in. pipe is 50; light pipe 60 and 10; fittings, 70 and 10 p.c.

Iron Pipe and Fittings.—Activity in this branch of the pipe trade is brisk. There is nothing to report outside of an improved business feeling. Quotations are unchanged. Black iron pipe per 100 ft. on 1 in. basis is \$4.70 and galvanized \$6.35. Discounts on fittings are: Malleable fittings, 40; cast iron, 65; standard bushings, 70; headers, 60; flanged unions, 65; malleable bushings, 65; nipples 75 and 10; malleable lipped unions, 65 p.c.

Solder.—There is a heavy demand for solder in consequence of the extent of the work now in progress. King solder, 26c; strictly solder, 25c; commercial, 24c, and wiping, 22c.

Lead Pipe.—This line of pipe is moving out steadily before an active demand. Discounts are 30 p.c. on lead pipe and waste; 50 p.c. on traps and bends; caulking lead is quoted at 4½c a lb.

Enamelware.—The amount of business in this department is very encouraging. It is in keeping with the general activity that is reported. From reports it is evident that the future demand is to be good.

TORONTO.

Toronto, May 19.—Conditions are "tolerably brisk," to quote a local supply man. Although no complaints have been voiced, it is apparent that business could be a little more active without seriously inconveniencing the supply houses. Still there has been an improvement since the warm weather began, and it is hardly to be expected that the slackness due to the backward state of the weather could have been dissipated entirely by this time.

Reports from all sections are to the effect that the trade is active. Contracts are being let in large numbers and, as building operations are getting well under way, the call for supplies should become more pronounced from now on.

Prices have remained very steady. With the exception of a little shading in some lines and a tendency toward firmness in solder, quotations given locally are the same as at last date of issue.

Enamelware.—In all lines of enamelware there has been a better demand, but things are not yet quite as brisk as they might be. "We are a little behind last year," declared one supply man, "but we are not complaining, as we expect to pick up lost ground in no time now. The present season should prove one of the best on record."

Boilers and Radiators.—Plenty of orders are being received, but it is said that shipments are being delayed on account of a slowness in building operations. Not only was the advent of open weather very slow, but it is now reported that there is a shortage of bricks to add to the troubles of the contractor. Consequently a great deal of the construction work has not yet reached the stage where heating work can be started. Many adverse orders have been placed, but are still being held up on this account. Only on this account is there any room for complaint, however. All local firms report that there have been plenty of boilers sold and that business generally has been exceptionally good.

Soil Pipe.—There is now a first-class demand for soil pipe. Prices seem a little chaotic just at present, so many conflicting quotations are heard. For instance, on medium and heavy, some firms are offering 70 and 10. Others quote 70 and 10 and 5; still others ask 70 and 10 and 10; and it is understood that quotations of 75 and 10 are also offered. It is rather hard to say what is the prevailing price at time of writing. On the 7 and 8 inch sizes, a discount of 50 per cent is allowed.

Lead Pipe.—There is a fair demand at present and prices remain firm. Lead

waste is quoted at 9c per lb., with a 30 per cent. discount. Caulking lead is quoted at 4½c per lb.; traps and bends show a discount of 50 per cent.

Iron Pipe and Fittings.—There is a better tone and a good movement in all lines is now noted. There have been a few price changes, but none of any consequence. Cast iron fittings are selling at a discount of from 65 to 70 per cent. Malleable fittings stand 37½ to 40 per cent. Cast iron bushings are 70 and malleable run all the way from 65 to 70. Nipples remain firm at 75 and 10, but 67½ and 70 is allowed by some firms on headers, while others still quote 60 and 10. Flanged unions stand at 70; malleable-lipped unions, 65 to 67½c.; galvanized pipe, \$6.19; black pipe, 1-inch size, \$4.51.

Solder.—The gradual strengthening tendency in tin has made quotations on solder quite firm, but so far no changes have been made. Wiping is quoted at 21c to 23c and half-and-half is selling at 24c and 25c.

Metals.—The metal situation is, in one sense, rather puzzling. Although a very satisfactory volume of business is being done in this country, the tone of the market does not appear healthy. There is an undertone of apprehension, which can be traced directly to the dull conditions prevailing in the United States. With the situation far from satisfactory across the line, buyers here seem to feel that fullest confidence cannot safely be placed. At the same time, the business being done here at the present time is satisfactory in point of volume.

Chief interest centres in tin at the present moment. A further advance has been recorded during the past week of 1 cent bringing the price up to 47 cents, and further developments of a more or less startling nature are anticipated between now and the end of the month.

A new city hall will be erected at St. Vital, Man.

Tillsonburg has carried a by-law to raise \$25,000 for a new public school.

The Alberta Beet Sugar Co. will build a factory at Claresholm, Alta.

The sum of \$100,000 will be spent on the court house at Revelstoke, B.C.

C. Rhol is to build a hotel at Calgary, costing \$75,000.

A 6-storey apartment house is to be erected at the corner of Butc and Nelson Streets, Vancouver.

The Alberta Engineering & Construction Company contemplate the erection of a structural steel shops with foundry and a machine shop in connection with same and are looking for a suitable site at Calgary.



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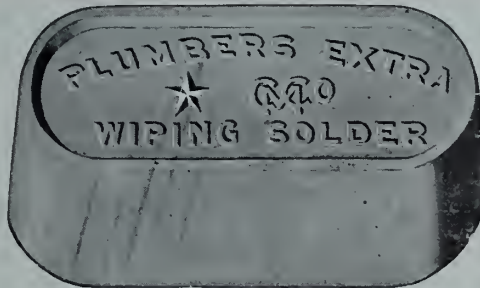
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 THOU CAN'ST NOT THEN
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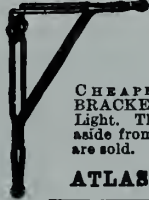
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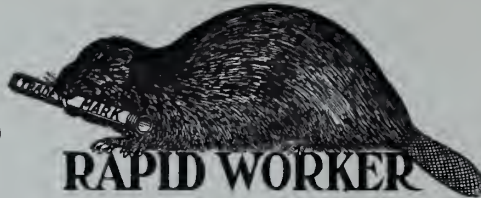
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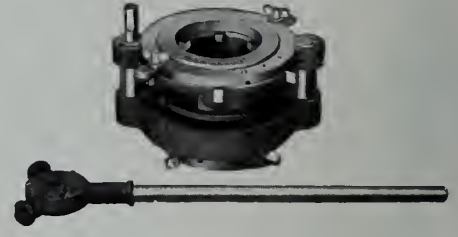
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"Astoria" Square Back Syphon Jet

All our low-down outfits are furnished with our Patent Combined Ball Cock with Shut-off Cock. This is the simplest and most efficient on the market, with full weight copper lining.

The James Morrison Brass Mfg. Co.
LIMITED

Toronto

...

...

Ontario



ASTORIA

SUPPLY

"Kerr" Radiator Valves

on your heating work, and
your valve troubles are over

*We charge the
price and furnish
the reliable goods*



The

Kerr

Engine

Co., Limited

Walkerville - Ontario



Look for
Our Name
"KERR"
on All
Genuine
KERR
VALVES

TO

leave the
job knowing
that all the joints
are tight is good, but to
know that they will never
require attention is better.

USING

DART UNIONS

ASSURES YOU OF IT

They make the joints quickly and easily, either in or out of line, and joints that stay tight until deliberately loosened. Then are just good as before. That Dart Unions save in the cost of installation is an established fact.

**YOUR JOBBER SELLS
THEM**

DART UNION CO., LTD., TORONTO

PLUMBER & STEAMFITTER

and Sanitary Engineer of Canada

THE MACLEAN PUBLISHING COMPANY, LIMITED, PUBLISHERS

MONTREAL, 701-702 Eastern Townships Bank Bldg.
LONDON, ENG., 88 Fleet St. E.C.

TORONTO, 143-149 University Ave.

WINNIPEG, 34 Royal Bank Building
NEW YORK, 115 Broadway

Vol. V.

Publication Office : TORONTO, JUNE 15, 1911.

No. 12





Alexandra Ware Bathrooms

Supplied to the

QUEEN'S HOTEL

MONTREAL

A beautiful and compact bathroom of the highest grade sanitary ware ever produced.

Alexandra Ware

Is manufactured exclusively by the

Standard Ideal Co., Limited

PORT HOPE, CANADA

BRANCH OFFICES AND SHOW ROOMS

TORONTO	MONTREAL	WINNIPEG
11-13 KING STREET EAST	4-6 BEAVER HALL BUILDING	70-82 LOMBARD ST.

PLUMBER AND STEAMFITTER

Beaver Brand

Cast Iron Enamel Ware

Noted for Good Color, Durability and Attractiveness



The above cut shows our Wall Lavatory—artistic, sanitary and durable.

One of our leading sellers. Our splendidly equipped plant is producing an unbeatable range of enameled Bath Tubs, Slop Sinks, Kitchen Sinks, Laundry Tubs, Lavatories, Closets, etc., and our customers can be sure of satisfactory goods promptly shipped. A guarantee goes with all Beaver Brand Enameled Ware.

Amherst Foundry Co., Ltd., Amherst, N.S.

ONTARIO SALES AGENT:

MONARCH BRASS MFG. CO., LTD., ¹⁷⁸⁻¹⁸⁰ Victoria Street, TORONTO

MARITIME PROVINCES
All Jobbing Houses

MONTREAL, P.Q.
All Jobbing Houses

WINNIPEG, MAN.
E. B. Plewes, 120 Lombard St.

VANCOUVER, B.C.
A. O. Campbell



Our New Catalogue is just off the Press. How many do you require?

FITTINGS LIMITED

OSHAWA

::

WINNIPEG

::

MONTREAL

Fig. I

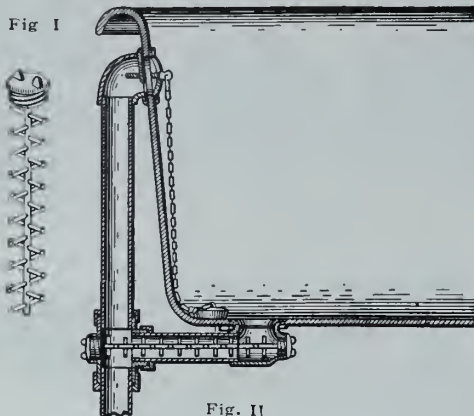


Fig. II

E.N.O. Patent Bath and Waste Overflow

SOMETHING NEW

Here is a Bath Waste and Overflow that can be thoroughly cleaned out from two outlets, viz: back of Bath or underneath. The Cleanout Rod, Fig. I, is made of aluminum, has a ball joint connection to the plug. All the fittings are of cast brass and heavily nickel plated. The whole is got up for use and will stand more abuse than any other Bath Waste in existence. Our patent can be used with any standard bath on the market.

SOLE CANADIAN MANUFACTURERS

Westport Mfg. & Plating Co., Limited
117 1/2 BANK STREET, OTTAWA



JUST WHAT YOU'VE BEEN LOOKING FOR

Rapid
BATH HEATER

NEW MODEL "F."

This new "Rapid" Model "F" has a gas regulating device on gas valve so that gas pressure at each individual heater can be absolutely controlled. This is a new feature and guarantees perfect results. Put this new "Rapid" Model up by the side of any instantaneous bath heater on the market and watch results under any conditions.

SEND AT ONCE FOR COMPLETE CATALOG AND PRICES.

RAPID HEATER COMPANY
(INCORPORATED)
GRAND RAPIDS, MICH., U.S.A.

A NEW VALVE

JENKINS BROS.'

GUN METAL AND IRON BODY

GATE VALVES

"TYPE K"

Special Features:

Highest Quality Steam Metal. Perfect Interchangeability. Double Compensating Bronze Wedges. Metal Gland in Stuffing-Box. Great Strength of All Parts. Carefully tested to 250-lb. Water Pressure

UNRIVALLED IN DESIGN AND WORKMANSHIP

A Thoroughly Reliable Gate Valve for Steam, Water, Oil, Gas or Air. A trial will convince you that it will pay you to use these valves on all your work.

Stamped with TRADE MARK like cut.

Stocked by Machinery, Hardware and Supply Dealers throughout the World.

Catalogue and Full Particulars Cheerfully Furnished on Application.

JENKINS BROS., Limited

Head Office and Works:

102 St. Remi St., Montreal, Canada

And at

95 Queen Victoria St., London, E.C.



I'M
NYE
the
Dye
Man



YOU CAN'T GET STUNG ON NYE'S No. 35 ADJUSTABLE HAND STOCK

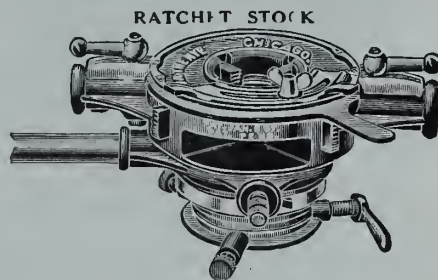
For the reason that I take it back if it doesn't do what I claim for it. It is because I have faith in it that I offer it in this way. I want to make it the popular tool that it deserves to be.

Edison wants to put a Phonograph in every home—Nye wants to put an adjustable hand stock in every plumbing and steamfitting shop in this country.

Edison's phonograph can make the music for the home but the Nye No. 35 will make bread and shoes. It will make a mortgage drift away, build a front porch or buy a new automobile. It will do all this in time out of the saving it affords the owner.

The Nye No. 35 is a ratchet stock, adjustable. It threads from 1 to 2 inches inclusive. The chasers are threaded on each end—one end threaded 1 and 1/4 inches and the other threading 1 1/2 and 2 inches. It is simple and made of the finest material. I've taken a great deal of pride in the No. 35 and I know you will like it if you will let me send you one on trial. If you think this is fair proposition drop me a line. I'm right at the other end of the mail sack, ready to fill orders.

Price complete, \$15 00 Net. NYE, THE DYE MAN.



Threads 1 to 2 inches, inclusive.

The Nye Tool and Machine Works, 124 North Jefferson St., CHICAGO



Work or War!

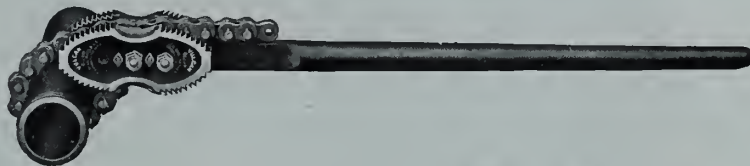
Discount from Dealers.

J. H. Williams & Co.,
SUPERIOR DROP-FORGINGS
77 RICHARDS ST., BROOKLYN, N.Y.

In either event you could not be better prepared for business and its emergencies—equipped with

"Vulcan-Bijaws"

- 1.—The jaws easily changed end for end, as teeth first in use wear, give you the service of two wrenches at the cost of one.
- 2.—The fastening of jaws to handle is a strong "Vulcan-Bijaw" characteristic. Either of the bolts provides full working strength of tool; in emergencies shift them and go ahead, but the cost is just the same as for "no-help" constructions.
- 3.—Any "one-sided" tool does not give you a central swinging chain (always right side up) but the cost is just the same as for a "Vulcan-Bijaw."
- 4.—You may not have occasion to use tools to their limit of strength, but you will find "Vulcan-Bijaws" with unsurpassed backbone and they cost no more, because they are guaranteed peerless in strength and utility.



WROUGHT PIPE

BLACK and GALVANIZED. SIZES, 1/8 IN. TO 4 IN.

All our pipe thoroughly inspected, tested to 600 lbs. hydraulic pressure and branded.

Ask your jobber for



Brand

CANADIAN TUBE & IRON CO., LIMITED

Montreal

Works: Lachine Canal



Ⓚ "ROYAL"

Syphon Action, Wash-Down Combination.



"ROYAL" 04

Syphon Action, Wash-Down Combination.

ROYAL LOW TANK COMBINATIONS

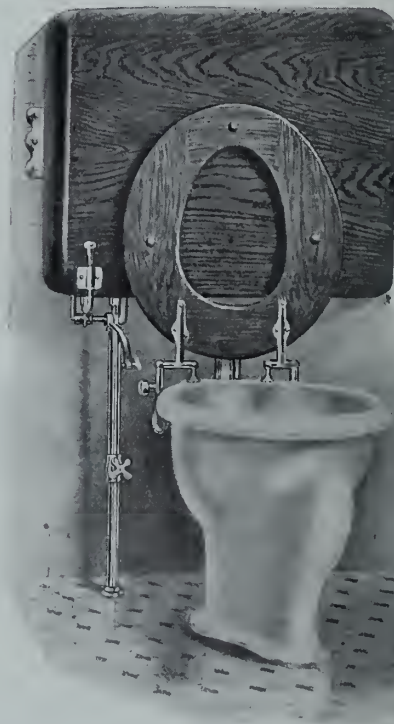


"ROYAL" A1

Syphon Action, Wash-Down Combination,
with Centre Push.

are a little
better than
any we have
yet seen.

They
Stand
the
Test



"ROYAL" 08

Automatic Combination.

Made and
Guaranteed
by

T. McAVITY & SONS, Ltd.,

ST. JOHN, N.B.

The Honeywell System OF HOT WATER HEATING

WAS ADOPTED IN THE YEAR 1910 IN

FORTY PER CENT.

OF TOTAL

Hot Water Installations Throughout Canada

Upon no other point are Architects, Steamfitters and Proprietors so well agreed as on the Merits of the Honeywell System.

The Honeywell Heating Specialty Company

Frank T. Rawley,
Manager for Canada

Room 1008 Eastern Townships Bank Bldg., Montreal.
Phone Main 4615

The "ADANAC"

is the Newest and Best Bath Cock on the Market—the Genuine Quick Opener Lever handles but NO Fuller Balls.

**"Patent Pending
Design Registered"**

The following points are the same as contained in OUR Quick Opening Sink Cocks.

1. FIBER WASHERS ENCASED. 2. STEMS DOUBLE PITCH THREAD. 3. RAISED SEAT (same as Compression Bibbs)
4. SPECIAL PACKINGS (same as Compression Bibbs)

OUR GUARANTEE

"Any article of our make, proving defective through inferior metal or improper workmanship, on our part, will be cheerfully replaced with two good ones at no charge to you."

CANADIAN BRASS CO., Limited

GALT

-

CANADA



Does Advertising Pay?

ABOUT a year ago a firm ran a double-page advertisement for compressed air water service systems in Plumber and Steamfitter. We do not know what results they secured at the time, but a few days ago one of our subscribers in Yarmouth, N.S., recalled the advertisement but had forgotten the name of the advertiser and asked us if we could give them the address.

Had this been a circular instead of an advertisement the enquirer would have been at a loss how to trace up the name and address of the manufacturer.

This is not an isolated instance. We will furnish on request a dozen similar examples which have come to our attention during the past few months.

Any manufacturer or jobber who is anxious to familiarize the Canadian plumbers and steamfitters with the merits of their goods or with the service they are able to offer will find the advertising columns of Plumber and Steamfitter the most economical method they can use.

The results may not be seen immediately but if you tell your story in an interesting and convincing manner the trade will remember you when you are in the market for the line of goods you have to sell.

Write us for full information as to advertising rates and the thoroughness with which we cover the Canadian field.

Plumber and Steamfitter

and Sanitary Engineer of Canada

MONTREAL

TORONTO

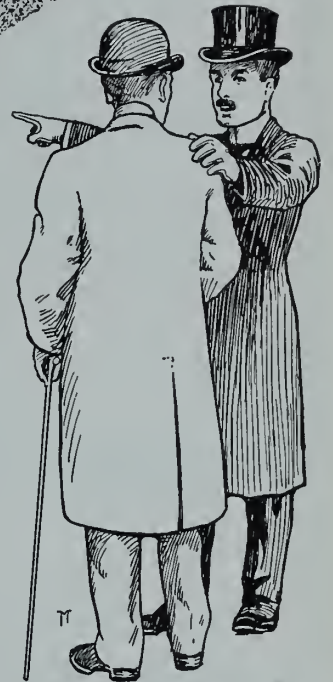
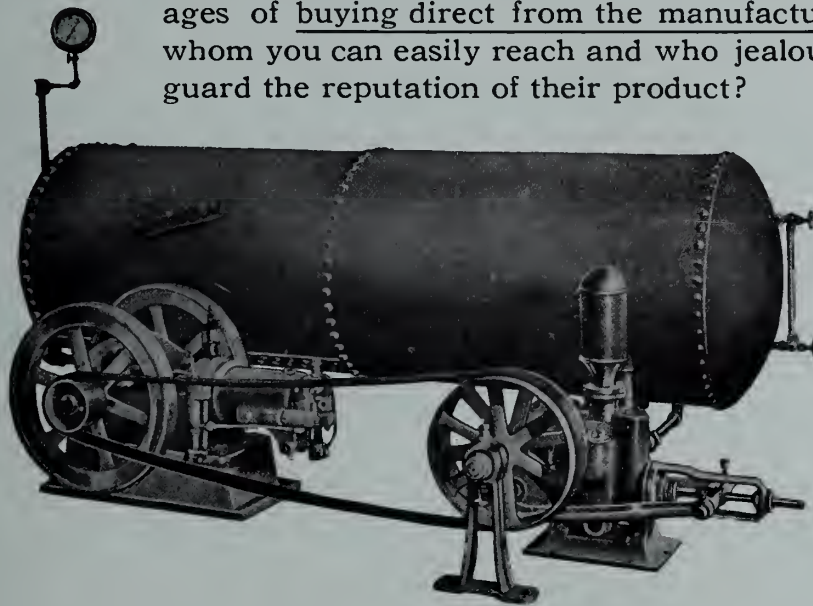
WINNIPEG

PEERLESS

WATER SERVICE SYSTEMS

THE
"GUARANTEED KIND"

Everywhere in Canada ARCHITECTS ARE SPECIFYING PEERLESS WATER SERVICE SYSTEMS. Why? Because their efficiency and simplicity appeal to them, and because they are guaranteed by a Canadian firm. Do you fully appreciate the advantages of buying direct from the manufacturer whom you can easily reach and who jealously guard the reputation of their product?



Peerless
WATER SERVICE
SYSTEMS

If you have not already done so, won't you ask us for our catalogue.

WE ARE HERE TO ANSWER QUESTIONS, to give you any information regarding water supply that you will ask for, NO MATTER WHETHER YOU INTEND TO PURCHASE OR NOT. If you are not clear about any point, ask us.

TANKS for hot water, air, gasoline, oil or any other purpose. Our quotations are the lowest in Canada.

National Equipment Company, Ltd.

21-27 LOMBARD STREET, TORONTO, ONTARIO

Page-Hersey Iron, Tube and Lead Co.

Limited

Buttweld — **PIPE** — Lapweld

Standard Merchant Pipe—

Genuine Puddled Iron Pipe—

Up to and including 10 in. inside diameter

FOR STEAM, GAS AND WATER



Extra Strong

—

Double Extra Strong

Hydraulic, Ammonia Pipe,

Oil and Gas Line Pipe

With our special Taper Sockets, for high pressure lines



Well Casing, Drive Pipe, Welded Bedstead Tubing,
Air Brake and Signal Pipe, Trolley Poles, Flag
Staffs, Nipples, Couplings



Head Office--813 Traders Bank Building, Toronto, Ont.

IT LOOKS SMALL

but there are a hundred little services a "want ad." in Plumber and Steamfitter can perform for you, cheaper, quicker, more thoroughly and more satisfactory than can be done in any other way.

It can get a customer for you for any show cases, screw cabinets or any other fixtures you are anxious to dispose of; it can secure for you a set of tools, a typewriter, a silent salesman or any other article which you are anxious to buy cheaply.

The wider your market the better the bargain you will be able to make.

Our "want ad." page will put you in touch with practically every plumber and steamfitter in Canada, and out of our thousands of readers it seems reasonable to suppose that there will be some man who is looking for just such an opportunity as you have to offer.

Rates (payable in advance)

2c. per word 1st insertion. 1c. per word for subsequent insertion.
5c. additional each insertion when box number is required.

Write or phone our nearest office.

PLUMBER AND STEAMFITTER

MONTREAL

TORONTO

WINNIPEG

THE JOHN STEVENS Co.

LIMITED

DEALERS IN

PLUMBERS' AND STEAMFITTERS' SUPPLIES

BATHS, LAVATORIES, BRASS GOODS, SOIL PIPE, FITTINGS, ETC.

OFFICE AND WAREHOUSE, 661 HENRY AVENUE, WINNIPEG

COCHRAN PIPE WRENCH

"The Wrench With the Positive Grip"

The Strongest and Most Durable Made

Competition is great among steamfitters. Moral—keep in the lead by using the latest and most up-to-date tools.

The COCHRAN PIPE WRENCH is strictly up to the minute.

Here is one of the secrets of success that you can see at a glance.

The COCHRAN PIPE WRENCH has a positive grip and a quick release that are thoroughly tested and guaranteed.

The rocker bearing takes the strain that is thrust upon the helpless frame pin. Any wonder it wins out?

You can give a side pull or a sudden jerk and you make no impression on this rocker feature.

Do not lose your customers by using inferior wrenches ---they spoil the pipes and your trade. The **COCHRAN WRENCH** never slips. It has a powerful grip and a quick get away.



Cochran Pipe Wrenches are guaranteed to give 50% more service than any other pipe wrench on the market.

Here are a few COCHRAN ADVANTAGES.

The frame and handle are one solid piece.

Rocker replaces frame pin and is indestructible.

Will positively not crush nor lock on pipe.

No lost motion.

Perfect grip and release.

Cannot be injured by side pull, owing to its solid frame.

Jaws drop forged from highest grade of tool steel adapted to the use of wrenches.

Don't let your competitors get ahead of you. Send us a trial order. Our guarantee protects you.

Write at once.

Cochran Pipe Wrench Mfg Co.

70 George St. OTTAWA

SEBCO EXPANSION BOLTS For Fixture Fastening

For You who are constantly looking for new and better methods of lightening your labors, or those of the men under you, and getting more satisfactory work we recommend the **Sebco Expansion Bolts and Anchors**.

For **Anchoring** steam pipes, radiators, chandeliers, seats, tanks, bath tubs, cabinets and other fixtures to walls and floors that won't hold ordinary bolts or screws.

Used without Solder, Lead or Plugs

Twice as cheap and four times more efficient than "wood plugging" or working in with lead. Write for free working samples and catalog 74, showing many uses and instructions that will help you do better work.



STAR EXPANSION BOLT COMPANY

147-149 CEDAR STREET

NEW YORK CITY

BACON BROS., 377 St. Paul St., Montreal, Can.; TURNER & WALKER, 147 Baunatyne Ave., Winnipeg, Can.
H. F. McINTOSH & CO., 28 Toronto St., Toronto, Can.

Under Expert Examination our

BRASS GOODS

have proved to be of exceptional quality. This is because of the modern machinery and methods we employ for every process of manufacture.

WE MAKE FITTINGS FOR GAS, WATER AND STEAM

CONTRACT WORK, such as Gas Stove Cocks, all sorts of CORPORATION BRASS, etc., is our special care, also PLUMBERS' BRASS GOODS, etc.

We have the plant and the trained workmen to turn out the very best grade of contract supplies in any quantity that may be required.

QUALITY CONSIDERED, OUR PRICES ARE EXCEPTIONALLY LOW

OUR FULL GUARANTEE WITH EVERY PIECE

The Wallaceburg Brass and Iron Mfg. Co., Limited
Wallaceburg **Ontario**

PLUMBERS SEIZE THIS OPPORTUNITY

To Sell and Install

THE

Water Witch

VACUUM CLEANER

It is convenient and economical, consists of two suction pumps, operated by means of a direct-connected water-wheel.

It has a mixing chamber in which the dust and dirt are mixed with the water discharged from the wheel, then the water and dirt pass away through the drain.

It has no belts, sprockets, chains or gears of any kind—nothing to wear or get out of order.

There are no dirt bags and screens, filled with filthy unhealthy dust and germs to empty.

The "WATER-WITCH" is operated by ordinary water pressure from the kitchen sink or bath tub, or permanently installed in the basement.

TAKE ADVANTAGE OF THIS OPPORTUNITY

It is cheaper to operate by water than by electricity and besides there are millions of homes in United States and Canada that are not even wired for electricity. *Every* home is a prospect for a "WATER-WITCH." You will make large profits on the sale of machines besides what you make on installation.

WE WANT AGENTS AT ONCE

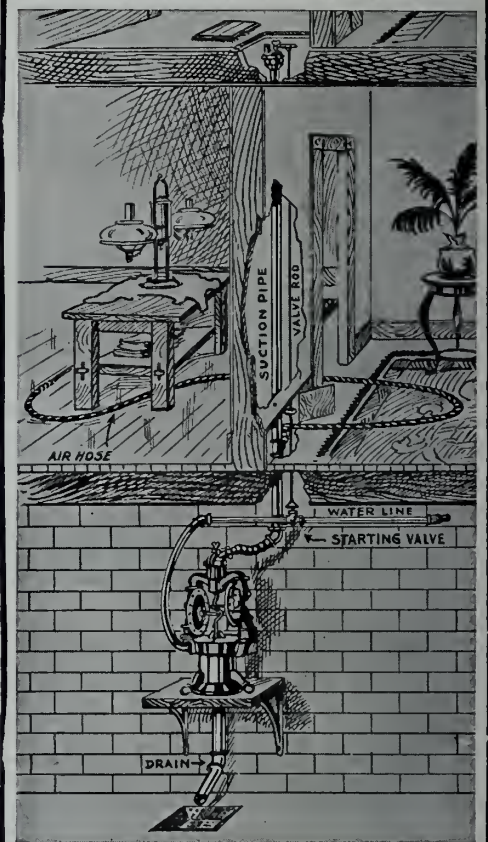
to handle this rapid selling proposition. Many choice districts are being quickly taken up. You will have to act at once.

Write us at once for our proposition and catalogue.

HYDRO VACUUM CLEANER CO.

898 Niagara St.

Buffalo, N.Y.



Plumber and Steamfitter and Sanitary Engineer of Canada

Published on the 1st and 15th of
each month by
**THE MACLEAN PUBLISHING
COMPANY, LIMITED**
Subscription - - \$1.00 per year
CABLE ADDRESS:
Macpubco, Toronto. Atabek, London, Eng.

JOHN BAYNE MACLEAN, - *President*
H. T. HUNTER, - - - *Manager*
T. B. COSTAIN }
J. G. LORRIMAN } - - - *Editors*

Circulating amongst Plumbers,
Steam, Hot Water and Gas Fit-
ters, Sanitary Inspectors, Heating and
Ventilating Engineers, City Engineers,
Boards of Health, Architects, etc.

TORONTO, JUNE 18, 1911

From practically all standpoints, the convention just concluded was the most successful ever held. In point of business done, it far exceeded any gathering in the history of the craft in Canada. Each session was replete

A RED LETTER CONVENTION.

with discussions on topics of vital importance. Where it differentiated from most past conventions, however, was in the fact that the discussions led in almost every case to some definite, tangible action. Words were crystallized into deeds and steps were taken which promise to practically revolutionize trade conditions in the future. It might aptly be termed the "business convention."

The one point accomplished which stands out prominently was the change in the name of the association. This step has been debated and favored widely for years, but never until the present year had the association even approached the point where action seemed imminent. It was a fore-gone conclusion, however, that the step would be taken. Opinion was quite unanimous in favor of the change, and it was put into effect with every manifestation of hearty approval.

THE PASSING OF THE PLUMBER.

It was a wise step. Under the new name, the trade should work itself up to a higher plane, and the association should acquire a deeper influence and a wider scope of usefulness. The reasons for the change are tersely, but clearly, set forth in the preamble adopted by the convention. They are convincing and all-sufficient.

It was in regard to the appointment of a salaried official that the convention showed its mettle. Feeling was unanimous that such an officer was needed, but it was seen that grave difficulties stood in the way of accomplishing this object. Where was the money to come from? At one stage of the discussion a slightly pessimistic strain

DIFFICULTIES SURMOUNTED.

was allowed to creep in. Leave it until next year, was the cry. Then from various parts of the hall, protests against inaction were voiced. The conviction gained ground that provision must be made in some way for the appointment of such an officer. Refusing to be balked by obstacles, the convention struggled with the question until finally the solution was found.

The appointment authorized by the association is only a stepping stone to greater things in the future. But for the present it will do. There can be no doubt that with

the improved facilities for organization now provided, the next convention will witness many improvements and new life infused into the organization.

The Canadian Society of Sanitary and Heating Engineers starts the year with a splendid executive staff. Jas. E. Walsh, last year's vice-president, is gifted with rare executive ability and a comprehensive grasp of trade problems, so that his occupancy of the presidential chair should be marked with distinction and success. E. J. Young, who succeeds

CAPABLE MEN AT THE HEAD.

Mr. Walsh as vice-president, has proven himself one of the most aggressive and well-read men in Canada. If Mr. Young can assist others to attain the same degree of success that he has reached in his own business, his work as an executive officer will indeed prove useful. John Watson, the secretary, is a veteran, and has filled every position practically that the association has to offer, so that he brings to the office mature judgment and a ripe experience. Treasurer Higginbottom is full of the western aggressiveness, and can be depended upon to fulfill the duties of his office as well in the future as in the past. All the provincial vice-presidents are good executive workers.

The delegates returned full of praise for the whole-souled way in which they were received and the lavish way in which they were entertained by the Twin City Association members. The local committees had striven for months to perfect their plans, and the result showed in the very elaborate programme which had been prepared for the entertainment of the visitors, and the painstaking efforts put forth to insure their comfort. No stone had been left unturned to make the convention a grand success.

A PRINCELY

ENTERTAINMENT.

All committee members worked loyally and earnestly, but special mention is due to Joseph W. Barnes, who conducted the publicity campaign and handled the correspondence. At the same time, all of the other members were most zealous and they each handled their special departments with marked success.

Every delegate has returned to his home filled with nothing but the pleasantest recollections of the Twin Cities—meeting place of east and west. If the convention ever goes back there, there will be a rush of delegates, dwarfing the attendance of last week, large though it was.

There is a certain large town in Ontario where the price-cutting epidemic is raging at the present time. One firm contracted it first and the others promptly caught the contagion. They are now suffering from a most

MAKING ONE PER CENT.

virulent form, and there does not seem to be much prospect of an immediate recovery. The writer happened to be chatting recently

with a gentleman connected with the trade in that town and learned something of the way the firms there are being affected. One plumbing firm did a business of \$65,000 last year, and had not a cent of profit to show for it at the end of the year. Close figuring showed that the plumbing work had netted something like one per cent., while the profits in the other departments were of such a negligible quantity that they could not be estimated on a percentage basis. The other firms had fared just as badly.

It is apparent that, unless they call a halt promptly, these firms are bound to reach the turn in the road of their business fortune which is termed bankruptcy. They cannot hope to continue in business if there are no profits to be derived from it. Neither can they hope to reap any benefit from forcing others to meet the conditions which are ruining themselves. What consolation is there in having "companions in misery?"

What the trade needs, and needs above everything else, is a better understanding between its members. And the only way to effectively promote a better understanding is to carry organization to a more complete basis.

Anybody want to buy a watch?

A motion of thanks to the retiring officers was omitted. This oversight is an annual one. It is to be regretted, as last year's officers certainly did do splendid work for the association.

Manitoba's new vice-president certainly is a brick!

Now, get that new sign painted and get the rig fixed up. And remember that henceforth the words "sanitary engineer" constitute the only official designation of the trade.

At last, it will be possible to get a good night's sleep.

The Calgary men have already started to plan for the big event next year.

"Joe" Barnes has not entirely forgotten the days when he played baseball with Detroit. He can still catch a good game, and he is a terror to run and jump.

The high values of real estate in the Twin Cities almost dazzled the "back east" delegates. They were not accustomed to the fast development of the west, where property grows in value over night.

There are still cities we could mention which need the services of a good organizer right away.

Every master plumber—beg pardon, sanitary engineer—should strive to keep in touch with the progress and work of the new society.

In Fort William and Port Arthur the members show keen rivalry, but the contest is purely one of wits and is carried on in a jovial way. They are all strong boosters for their own particular line.

Every man at the convention who did not subscribe to Plumber and Steamfitter—they were few in number—lost no time about subscribing when they found what the others thought about this paper.

The plumber is dead, long live the sanitary and heating engineer.

WHAT CONSTITUTES NEWS?

In conducting a trade newspaper, the question frequently arises whether the material which is periodically furnished by manufacturers and jobbers is to be classed as news, or merely as "puffs," which have no real place in the reading columns of a well edited paper.

Plumber and Steamfitter is called upon, every week, to discriminate between these two kinds of copy, and, in order that full justice may be accorded to all, a definite rule has been adopted, which is followed in every case.

The test applied is that the copy shall have real news value, and shall be of interest to a sufficient number of our readers.

New goods which are just being put on the market possess news value of a high class, in a trade paper whose readers have their eyes open at all times for novelties and improvements in staple goods. News regarding changes in management, descriptions of new manufacturing processes, are also admissible, as are announcements of any vital changes in business policy. When a manufacturer erects a new plant or an important addition to his old factory, the distributors of his goods are naturally interested in knowing about it, and Plumber and Steamfitter is glad to publish news items of this description. It is our policy, however, to exclude illustrations of exteriors of buildings, as architectural drawings are usually misleading, the size of the building being merely a matter of perspective.

An actual and recent occurrence, therefore, should form the basis of any reading matter for publication in Plumber and Steamfitter, and this policy of accepting news and rejecting "puffs" from manufacturers has been taken in the interests of both readers and advertisers.

It is only natural that readers who are in the habit of stumbling across pointless "puffs" in the reading pages of a paper should soon begin to question the value of such a paper to them, and, even though they might continue as subscribers, the tendency would be to pay less and less attention to it. Just at this point, the advertisers' interests would be affected, as a paper which has not the absolute confidence of its readers, and is not really interesting to them, cannot accomplish results for its advertisers.

It is not long since manufacturers, in placing advertising contracts, wished it to be understood as a part of their contracts that they should have the privilege of contributing "write-ups" to the reading columns of the paper. A different opinion now prevails, however, and the closest students of advertising realize that a paper which carefully guards its reading columns against matter which does not interest its subscribers, is also performing a service for its advertisers, who benefit from it in direct proportion to the confidence reposed in it by its readers.

16th Annual Convention of National Association

Large Attendance of Delegates at the Twin Cities—Fort William and Port Arthur En Fete for the Occasion—The Opening Session was Largely Attended—Addresses of Welcome Delivered.

Twin Cities, June 12.—The sixteenth annual convention of the National Association of Master Plumbers and Steamfitters of Canada, is now in progress, and both Port Arthur and Fort William are crowded with visitors wearing the bright convention badges.

The attendance is both large and representative, delegates being on hand from practically all parts of the Dominion, except from the far east. All incoming trains and boats brought their quota of visitors to-day. The Toronto party arrived on the "Assiniboia" several hours late, the big steamer pulling into the Port Arthur wharf at ten o'clock. There was a big contingent on hand to welcome the Ontario delegation but the party did not leave the boat until arriving at Fort William. Here they were joined by the Montreal contingent. The latter party had made the trip by train, leaving Montreal at an early hour Saturday morning. Despite their two long days' trip, the Montrealers were feeling quite fit and entered at once into the spirit of the gathering. Shortly before noon the C.P.R. train from the West pulled in, bringing the Calgary and Edmonton crowd. The westerners came down twelve strong, with the avowed intention of taking the convention to Calgary next year. They had hardly struck the platform before they had begun to canvass right and left for support. Blue ribbons with the word "Calgary" were handed to everyone to be worn over the red convention badge, supplied by the Twin City Association.

A Most Hearty Welcome.

The welcome extended by the local committee was most hearty. Each train and boat was met by a committee, and the arrivals were whisked off in automobiles to the various hotels. The committee even insisted on carrying all grips and as for any of the visitors spending money, it was quite impossible. The officers and executive were taken to the Prince Arthur Hotel, the handsome new structure erected by the Canadian Northern at Port Arthur. The Calgary contingent also registered there. The rest of the delegates were distributed among the other hotels in the two places.

Cities Were Decorated.

The decorating committee had done their work very thoroughly. Banners

greeted the eye on all street corners and the public buildings had been decorated with flags. Streamers, stretching from side to side of the streets, expressed the welcome of the two cities.

The Opening Session.

The Agricultural Hall, which is situated half way between Port Arthur and Fort William, had been selected as the meeting place for the convention. The delegates assembled there at 2.30 in the afternoon, and although at that time all the delegates had not arrived, there were nearly one hundred present in addition to many visitors, so that the hall was pretty well filled when President Cooper ascended to the chair, which had been placed in a gallery above the



PRESIDENT COOPER,
Who Presided at the Sessions.

main floor of the hall. The building had been elaborately decorated with flags and bunting, long streamers meeting in the centre, where a large parti-closed umbrella was hanging. Altogether, the hall presented a highly festive and attractive appearance.

Those seated on the platform were: President Cooper, Vice-President Walsh, Secretary LeGrow, Treasurer Higginbottom, Past President Laurier, Ontario Vice-President Shannon, Alberta Vice-President Young, Acting Mayor H. P. Dawson, Port Arthur; Mayor C. S. Young, Fort William, A. C. Waltz, Chairman Reception Committee, E. J. Farrell, North Bay; Ald. Mahoney,

Guelph; Ald. Cooper, Port Arthur; Ald. Hewson and Ald. Laughlin, Fort William; Commissioner Ross, Fort William; J. Marshall, Port Arthur, and T. B. Costain, Plumber and Steamfitter.

The President's Welcome.

President Cooper opened the proceedings by extending a hearty welcome on behalf of the association to all present. He expressed the hope that the proceedings would be characterized by helpful discussions and that all the delegates in attendance would receive much benefit. He commented briefly on the arrangements made and invited the co-operation of all in making the sessions of interest.

A credential committee was appointed, consisting of J. Priestly, Calgary; A. Cameron, Fort William, and J. A. Gordon, Montreal.

Extended a Welcome.

Mayor C. S. Young, of Fort William, on rising to extend a welcome on behalf of the municipality, was greeted with loud cheers, and a chorus of "He's a Jolly Good Fellow." He referred to the fact that the plumbing industry was one of the oldest in the world. He had seen work in the ancient city of Pompeii, which was supposed to have been done twenty-five hundred years ago and, apparently, plumbing had been done from the very first of time. Consequently, he would not have felt surprised if the convention then in progress had been the ten hundred and sixty-seventh annual meeting instead of the sixteenth.

He referred to the fact that the position of Fort William and Port Arthur rendered them ideal locations for conventions, situated as they were halfway between east and west. In the future, doubtless, all such meetings would be held in either of the two places, or both. He assured them all of a hearty, western welcome. The keys of the city would be handed over to them, with one stipulation only. The keys must not be allowed to fall into the hands of Ed. Higginbottom. (Loud laughter.)

President Cooper.—"Then Ed. Higginbottom must have hypnotized us last year for we gave him the keys of the treasury."

Kind Police Force.

In the absence of the mayor of Port Arthur, who was at the Coronation, Acting Mayor Dawson added a few remarks of welcome. "I am sorry to say that we cannot hand you the keys of the city," he declared, "because our mayor

took them away with him. We give you the city without the keys. (Applause.) We have instructed the members of the police force to do everything they can for you. (Laughter.)



ANDY WALTZ,
Chairman of Reception.

Mr. Dawson then referred to the broad scope of sanitary work. From what he could learn, the plumbers were undertaking a great work, and he desired to congratulate them on their aims and their great work in the past. He hoped their future would be marked by continual progress toward the ideal condition now aimed at.

He enumerated some of the attractions of the Twin Cities, and expressed the hope that they would find time to visit them all.

Replied for Association.

Ald. Harry Mahoney, of Guelph, replied on behalf of the association. "I hope that there is no significance in the fact that our coming here has been marked by the building of a new jail," he began amid laughter. He stated that the attendance of delegates was indeed satisfactory, and was a fitting recognition of the efforts of the committees. He then moved, seconded by Wm. Mansell, "That this convention of Master Plumbers appreciate the welcome extended to us to-day by His Worship Mayor Young, of Fort William; Acting Mayor Dawson, of Port Arthur, and Commissioner Ross."

The resolution was carried by a standing vote, hearty applause attesting to the unanimity of the delegates on that score.

Promised Free Rides.

Commissioner of Industries Ross, Fort William, added to the welcome previously extended by the civic representatives. If the delegates at any time needed help, he would see to it that they were

given what they required. Loud applause was evoked by his promise to see if it could not be arranged so that all delegates would ride free on the cars between the two cities.

"This convention is an evidence of the growing importance of our country," he continued. "Your association is showing a steady gain in strength. The wisdom of organization cannot be overestimated. One straw is easy to break but get a number of straws together and it becomes first very difficult, then impossible, to break." (Applause.)

A Polite Hint.

Treasurer Higginbottom announced that, as a number of delegates had not



H. MAHONEY,

Who Responded to the Address of Welcome.

paid their dues, it would assist him very much in his work if all such would do so at the earliest possible moment.

Committees Appointed.

The following committees were then appointed:

Press.—D. Anderson, Fort William; J. W. Barnes, Port Arthur.

Select (To go over year's correspondence).—J. Marr, Calgary; Jos. Laurier, Montreal; A. C. Waltz, Fort William.

Resolutions.—H. Mahoney, Guelph; Wm. Mansell, Toronto, and M. McKnight, Edmonton.

Audit.—J. E. Farrell, North Bay; W. Evans, Port Arthur; E. N. Martin, Calgary.

Brief Convention Notes.

Mr. Emerson, of the Monarch Brass Co., accompanied the Toronto contingent as far as Fort William. He was going on a trip to the coast.

The Port Arthur and Fort William members closed shop practically for the week.

A big banner had been erected at the wharf, Port Arthur, but it was blown down before any of the outsiders arrived.

At the bowling match Monday night there were not boys an hand to run the alleys, so Jack Marshall, Evans and McCarthy took their places in the pit and worked like Trojans.

Judge Forbes is building a handsome new residence at Prince Albert, Sask.

St. James congregation, Saskatoon, have decided to build a parsonage this year.

The by-law to grant a fixed assessment and free water to the G.T.P. for twenty years if they build an hotel at Edmonton, carried.

J. F. Cavins, of Edmonton, has completed negotiations for the erection of a large 4-storey store, 100 by 140 ft. on the corner of Second Ave. and Twenty-Third Street. The total cost will be \$400,000.



JACK MARSHALL,
Vice-President of the Ontario Society
Met Everyone with the Query:
"Want to Buy a Watch?"

Splendid Reports from Officers and Committees

Need of Permanent Secretary and Organizer Dwelt Upon— Plans Presented for the Furthering of Association Work—Able Reviews of the Year's Work.

The second day's proceedings opened at 2.30. The morning had been spent by the committees in going over the correspondence and preparing their reports so that the afternoon session proved a business one in every sense of the word. Despite the handicap of a late start and several interruptions, practically all the reports were received and read.

Never before in the history of the association had the reports contained so much useful information and so many valuable suggestions. "I believe," said one delegate, when the adjournment was reached, "that more will be done at this convention than all others put together." Certainly there was enough material in the reports of the officers to provide the convention with enough work to justify that prediction.

The report of the credential committee was first presented, followed by the calling of the roll. There were only a few absentees.

Communications.

James Brandon, president of the master plumbers of Saskatoon, wrote, introducing the two Saskatoon delegates and asking that they be given all information possible.

Robert Thomson, Manitoba, vice-president, wrote, regretting that he was not able to be present.

President's Report.

President Cooper's Address read as follows:

"I take it as a pleasure to submit my report to the 16th annual convention of the national association.

"Looking over the work of the past nine months, since our last convention held in Toronto, it affords me great gratification to see the splendid way in which the business of the association has been carried on, the considerate help received from the secretary, and the co-operation of the various officers of the association and the trade paper, Plumber and Steamfitter. It may interest the association to know that I have received some 14 or 15 letters to which I replied, and I have had 11 personal interviews with master plumbers when they were in the city of Toronto on business, and have done all I could to make them welcome and to show them the advantage of getting together in an association. I know that it has borne fruit, as Ontario has formed a Provincial association, the details of which you will hear from the vice-president of Ontario's report. My

personal views are that the association has not grown in the last 15 years as it should have, and I think the reason is that the officers are changed too often to accomplish the purpose of this association, for they no sooner get in touch with what they should do, than there is a convention, and new ones appointed. These, as a rule, are so far from the previous officers, that it takes too long to communicate with them to find out what their plans were. I would suggest that all new officers should be appointed for 2 years in future.

"I also found during my term of office that this association has by-laws and constitution. We should take this up at this convention, that they be revised by a committee in order that all members may have a printed copy of by-laws and constitution. This association should also have a seal so that letter heads and corresponding paper may all be the same.

"The association should do something to check the invasion of master plumbers from the United States. They figure on and get work which should be done by the master plumbers in Canada. The laws of the United States do not allow anything like that, and we ought to get legislation by the Dominion Government or the Provincial Government.

"I would also recommend that we prepare a Dominion directory of members of N. A. M. P., also a list of manufacturers and jobbers in accord. This list might be revised from time to time.

"I am desirous of bringing before the members of this convention the matter of changing the name to the National Association of Sanitary and Heating Engineers of Canada, as I find that some of the local associations and the Province of Ontario associations have chosen the above name. Also that we should be incorporated.

"During my term of office I have tried to keep in touch with local associations, and things that I have heard from time to time show that they seem to have an up-hill fight. In my own city, I am sorry to say that matters are not in good shape as they were when the convention met there in September last year, although there has been a great deal of work done. But I think the turning point has come again, and that before the year is out Toronto will get her high standing again.

"Since our last convention we have lost one of our past presidents, Robert Ross, whom we, as well as all men who

crossed his walk of life, respected for his high character and fair dealings, and there is no doubt in my mind that every member of the national association must feel our loss, as his efforts and good nature were one of the most cherished assets of our organization.

"With regard to the Province associations, I have no word, but I hope that the vice-presidents' reports will be as good as that of the Ontario vice-president.

"Gentlemen, this concludes my report for the nine months of my term in office, and I wish to thank you for the honor conferred upon me, of which I have tried to be worthy. It has been my sole aim on all occasions to promote the interests of the association and the master plumber in general, and I hope that my efforts have not been in vain, and that beneficial results will be seen before the year 1911 is out.

"I wish to express to you my thanks for the way you have borne with me whilst I have tried briefly to show the work of the association and its praiseworthy objects. I hope the 16th annual convention will be a record gathering and that all business that is done at this meeting will meet with the approval of, and be beneficial to, all master plumbers of this great Dominion. And finally, let our motto be, "One for all and all for one."

Vice-Presidential Report.

Vice-President Walsh submitted the following report:

"So far as an official report is concerned, I can only state that I followed up to the best of my ability any communications received from your National sub-committee, and inasmuch as possible kept the Montreal Association posted on all matters pertaining to it. As the National Vice-President's office, however, is not limited to any special field of labor, I am taking this opportunity of dealing with Association matters in a rather general manner.

"It is no doubt gratifying to be able to report that your sub-executive members deserve more than an ordinary share of praise for the painstaking manner in which they have fulfilled their duties. They have been most consistent in their efforts and to them full credit should be given if this convention is as successful as anticipated.

"But in our Convention gatherings, splendid as is always the organization for the comfort and welfare of the guest, no such care is given to the business and financial results, which should certainly be our first and most essential study. Personally, I do not believe that too much time can be devoted to the preparation of any subjects tending to the advancement of our Association.

What I would propose for your consideration is the adoption of a uniform set of rules governing the serious side of all future gatherings. The following suggestions are respectfully submitted for discussion with the hope that some good results might ensue.

1. "If not practicable at this meeting to name the place and date of the next convention, have both settled by the incoming executive at least six months in advance.

2. "Within 30 days after their decision, every local to be notified by the national secretary, who shall also mail printed circulars summarizing the most important business items to be transacted or discussed.

3. "Every local to appoint its delegates three months in advance, so that they (the delegates) might hold meet-



J. E. WALSH.

ings and have all important subjects discussed and voted upon by their own locals.

"The idea is to secure united and concentrated action. To illustrate, I might say that had the proposed change in name of this body been voted upon last year by all the locals, the question would have been definitely decided then once for all at the past convention. Much time would have been saved and a more valuable and unanimous opinion obtained.

"Officers and delegates would also come prepared to discuss matters in a more concise and intelligent manner and prevent the strange occurrence of hearing several representatives from the one locality expressing as many different and opposite views on the one and same subject. The provincial vice-president's services likewise could be more fully utilized, as it would be their bounden duty to co-operate with the national sec-

retary and furnish him with all the information in their power. In this manner a closer gathering of the different branches would be inevitable; unity would follow, unity systematized and well regulated, with a subsequent gain in the brevity and strength of our deliberations as a national body.

"In this report, I have purposely refrained from discussing the present prospects of my home province, as I am convinced that your Quebec provincial vice-president will do full justice to that matter in his report.

"In conclusion, I beg to thank all the officers and members for the hearty support given me during my term of office, also to reiterate the expression of my best wishes for the continued success of our Canadian journal, *The Plumber and Steamfitter*, which is, as in the past, untiring in its efforts to further the cause of our national organization.

"Yours faithfully,

"J. E. WALSH."

Secretary's Report.

Secretary LeGrow reported as follows:

"At the last National Convention, held in Toronto, Sept., 1910, I was requested to accept the position of Secretary. I have no apologies to make for any work that should have been done and which has not been done. I have kept up my correspondence and have looked after extensive communications from all parts of the Dominion. I have received letters from coast to coast, from centre to circumference, and the magnitude and possibilities of National work is, as yet, in an embryo condition. When one considers the different environments, the different local and provincial organizations, the different personalities in the plumbing business, the multitudinous demand made on men in the smaller places where one is expected to be all things to all people, a general director of public health, when these men are continually asking for information and expecting that the larger centres of trade have grasped the importance and significance of their profession and when one has to inform them that the extent of our knowledge in National Sanitary affairs is very limited and that we are coming out of our embryo condition very slowly, we wonder whether to be pessimistic or optimistic, but from my experience this last year, I am satisfied that we are beginning to grasp the responsibility that we are under to the public to promote and to see enforced Dominion Sanitary legislation. I am strongly recommending a salaried secretary, a young man as an introduction to receive a certain salary for the first year and

all his expenses, who could also act as organizer for the Dominion whenever his services would be required. I would also suggest that two men of the National Association should be appointed to act as a Sub-Executive to have full power to deal with questions arising from the organizing of local bodies as a result of the permanent secretary's work and that these men should meet at least every month and receive \$5 each and expenses for every meeting they attended. The time has passed when we should ask that men sacrifice their time in order to do the work that is waiting to be done. I would suggest that for next year if you decide on a permanent



Secretary Legrow read his report, which contained many suggestions and showed a fine command of English.

secretary that these three men be given full power to co-operate and to centralize their work in any part of the Dominion or over all the Dominion. If, in their judgment, they think it best, I would like to see them looked upon as a board of Directors subject to the suggestions of any member of the Plumbing business in Canada, and to use their own judgment in acting on these suggestions.

"Some things that they could do:— To consider the best method of placing on the Dominion Statute Book a minimum sanitary by-law. That a Dominion Act be asked for, governing the Sanitary arrangements of all towns and cities having waterworks and sewerage plants. That the Dominion, Provincial and local boards of health have at least one repre-

sentative of the plumbing profession. I would suggest that this National Association be the central point from which should radiate information and organization for provincial and local work. That the enmity and local squabbling could be removed by influence from without and that more successive and progressive work could be done from a Dominion central body entirely removed from the influence of local conditions. That from the Dominion should come help and suggestions, influence and power. I have had a number of personal letters telling me of the impossibility of local men organizing themselves and asking if it is not possible to have an organizer from some central body. I would suggest that a committee be appointed to consider ways and means to raise money to start active National work. I have sent out about 3,800 different communications and have received every consideration and many evidences of appreciation. I wish to thank the editor of the Plumber and Steamfitter for his hearty support and co-operation during the past year. He has always been prepared to furnish any information or to do any work that would be of interest to the National Association."

Sub-Executive Report.

Secretary LeGrow gave a synopsis of the last annual report and recommendations from the sub-executive, as a result of their meetings held in Toronto on different dates, the members present being, Geo. H. Cooper, R. J. Shannon and Lewis LeGrow.

"After carefully reading the minutes of the last convention of the National Association of Master Plumbers, held in Toronto from August 31 to Sept. 2, 1910, we respectfully present to your consideration our viewpoint. The first recommendation of the president, Joseph Laurier, Montreal, that permanent salaried secretary be secured. We would concur in this recommendation. Quebec vice-president, J. E. Walsh, Montreal, report. We note that he deplores price-cutting because of its fruitless and thankless struggle. We will recognize this condition and we would ask the men engaged in the trade to cease their noise of low price arguments and listen to the quiet call of honorable rivalry and above-board, productive business methods. Do good work, handle honest material, see that you receive a profit on your labor and you will soon awaken to the folly of securing work at any price. Some questions asked in this report:

"1. The elimination of the general contractor so far as the technical and heating trades are concerned.

"2. The revision of the official selling price list for job work.

"3. The amalgamation of the business exchange.

"4. The study of existing conditions in order to ascertain the more effective manner of conducting a plumbing business, special attention being given to the exact cost of running expenses and to the proper percentage to be added to secure a definite and tangible profit. Our personal recommendations are:

"1. The elimination of the general contractor would be to the advantage of the plumbing and heating business in many ways.

"2. The revision of the official selling price list. This might be a question that might be more easily dealt with by the different local associations.

"3. We would recommend that local associations deal with this question.

"4. We are enclosing you an accurate report of what it costs in Toronto to run a plumbing business up to \$20,000 a year. You will notice that the overhead expenses, such as salaries, rent, etc., are a little more than 17 per cent.

"We would also suggest that some time be devoted at this convention to the study of local conditions and exchange of ideas, the best means to be adopted to organize local associations. Should not the National Association forward a movement to instruct and supervise all Dominion work, or should they still adhere to their present policy of national growth from local and provincial associations?

"Ontario vice-president's report, R. J. Shannon, Toronto: That the National Association consider his suggestion re the advisability of securing the enactment of provincial law.

"Alberta vice-president's report, E. J. Young. His suggestion that an organizer be appointed from the National Association to organize local and provincial associations. We would recommend this to the serious consideration of this association.

"Special committee's report, by Jos. Laurier: We would recommend the securing of a Dominion charter incorporating this association into the Canadian Society of Sanitary and Heating Engineers.

"Sanitary committee report, per P. C. Ogilvie, Montreal: His recommendation that the local organization should seek the assistance of the national officers in sanitary by-laws, is strongly approved of by your executive. That Dominion plumbing inspectors should be appointed by the Federal Government, to deal with the unsanitary conditions in any part of the Dominion. His suggestion that nearly everything that the Master Plumbers' Association undertake to do is looked upon with suspicion, we do not exactly concur with, and would recommend to

the trade the thought of the poet Whit-tier, that 'What aileth us in others in ourselves may be, that from ourselves this suspicion has arisen.'

"Apprenticeship committee report, James Griffin. His recommendation that apprentices should attend technical or trade schools should be heartily approved of, and encouraged. That the resolution of Mr. Marr, Calgary, memorializing the manufacturers of lavatory basins and other fixtures, expressing our disapproval of all non-accessible, hidden over-flows, be confirmed by this association and influence brought to bear to induce the manufacturers to make better sanitary fixtures."

From Nova Scotia.

F. Dexter, Truro, N.S., the vice-president for Nova Scotia, submitted the following report:

"It is my duty at the present time to submit my report re association work in Nova Scotia for 1910-11.

"We are incorporated into an association by the name of 'The Master Plumbers' Association of Nova Scotia,' having for its objects and purposes the following:

"(a) Promoting the advancement of the trade in its sanitary, commercial and scientific departments.



FRANK DEXTER.

"(b) Protection against imposition, injustice and encroachment upon its common rights and interest.

"(c) The education of its members and the improvement by its members of the plumbing trade generally.

"(d) The dissemination, among the public, of sanitary science and its principles.

"(e) The mutual assistance of its members.

"Particularly in purpose (b) our association has done good work.

"The other purposes, I regret to say, cannot be reached until we can get some life into the association, and we cannot get that life unless master plumbers all over Nova Scotia come in with us and lend a helping hand.

"An association in a rut is caused by non-attendance at meetings, also carelessness in not paying their dues, etc.

"The membership in our association stands at present, 18 members, out of which we have 10 only in good standing.

"Under our present system a provincial vice-president cannot do anything except write letters, asking different firms to join the association, and the subject on paper does not interest them enough to answer our letters. If we could afford to make a personal canvass the result perhaps might be different.

"I must report at present a gloomy outlook, but can assure you we are still in the ring, and may 'come back' at any time."

Word From Manitoba .

Vice-president Thomson of Manitoba reported as follows:

"As vice-president of Manitoba for the N. A. M. P. of Canada, I herewith beg to submit my report in association matters.

"Up to the end of March, 1911, there was no association of master plumbers in Winnipeg. About the beginning of April a few others and myself got together and discussed the advisability of once again forming an association, with the result that we decided to organize at once.

"We sent out notices to every firm in the trade, advising them that a meeting of the master plumbers would take place in the Builders' Exchange room on an appointed day.

"Over thirty firms were represented at this meeting, when it was unanimously agreed to inaugurate a Master Plumbers and Steamfitters Association, and immediately set about the election of officers, the following being duly elected: President, Mr. Robert Thomson; vice-president, Mr. J. Hammond; secretary, Mr. W. J. Brick.

"We have had some very good meetings which certainly have proved beneficial to all in the trade. We agreed, after a lengthy discussion, to add 10 per cent. on cost of all material and labor for overhead expenses, before adding profit. This item of charges was a surprise to quite a few.

"In Winnipeg there are over 70 plumbing and heating firms, and to date we have a membership of over 40 in our association.

"We have started to keep track of all the journeymen, plumbers and steamfitters, in Winnipeg, by means of application forms, which they are requested to fill in when applying for a situation.

"Every master plumber and steamfitter is also requested to fill in another form, showing the number of men employed by them, their names, trade, and wages paid, which means that the idea of peddling and floating from one firm to another is done away with.

"The scheme, we think, will fill a long-felt want and will do away with mechanics leaving one employer to go to another who offers more money. What



R. THOMSON.

we want to arrive at is a maximum rate of wages, and by the above mentioned forms we will be able to rate almost every mechanic in our line of business in Winnipeg.

"Our meetings at present are not too well attended, owing to every firm being extremely busy, but when any important matter shows up, they come spontaneously at the call of the secretary.

"We are in great hopes of having a first-class association in a short time, and will be very pleased to receive information from the National Association which will assist us in our good work."

Report from Ontario.

The annual report of Vice-President Shannon of Ontario was submitted as follows:

"I beg to submit my humble report as vice-president of Ontario. Having occupied that position for the last two years, I am glad to say that great progress has been made in Ontario. A meeting was held in Toronto on April 14th, 1911, of Ontario Master Plumbers who organized a Provincial Association under the name of the Ontario Society of Sanitary and

Heating Engineers. There was an attendance of twenty-two master plumbers at the meeting. Various ways and means of bettering our trade were discussed but the most important dealt with was the securing of a Provincial Charter. I might say that good progress has been made on that line in so far as securing copies of applications of different associations who have secured Charters; and having had these laid before us, we have subtracted what we think sufficient to cover our particular trade. Steps will be taken to continue this work as fast as possible. There was also a motion carried at that meeting that the members present constitute an executive body to further Ontario interests. While to me this was a good move, I think at the present time, if it were possible, that all Ontario delegates who are in attendance at this convention should hold a meeting here and divide Ontario into six or eight territories, appointing one man over each so that he would be responsible for that particular part in getting the boys together. To my mind this would minimize the work and we will get better results. In regard to conditions in my own city, price cutting is as bad as ever. The wholesale house sells to anybody and we are not in a position to change these conditions.

"I enclose a copy of our prospectus which we will use to secure our charter. Now, in conclusion, I thank the members of the National Master Plumbers' Association for the confidence they have placed in me in electing me to that office, and also to extend my hearty thanks to the good work and assistance given to me by our trade paper, Plumber and Steamfitter."

Synopsis of Application re Charter.

An act respecting the profession of Heating and Sanitation.

Whereas it is deemed expedient for the better protection of the public interest in regard to heating and sanitation in the erection of public or private buildings in the Province of Ontario and in order to enable persons requiring professional aid of these trades to distinguish between qualified and unqualified sanitary and heating engineers and to ensure a standard of efficiency in the persons practising in the profession of such in the Province and for the furtherance of the same.

Therefore, His Majesty by and with the advice and consent of the Legislative Assembly of the Province of Ontario, enacts as follows:

Short Title.

This act may be cited as "The Ontario Society of Sanitary and Heating Engineers' Act."

Incorporation of Ontario Society of Sanitary and Heating Engineers.

2. All persons who shall call their names to be registered under the provisions of this act shall be and are hereby incorporated under the name and style of the Ontario Society of Sanitary and Heating Engineers, hereinafter referred to as the association.

Powers of Society.

The Council shall have power and authority:

(1) To appoint an examiner or examiners for the purpose of ascertaining and reporting upon the qualification of all persons who shall appoint themselves for admission and enrollment as members.

(2) To make all necessary rules, regulations and by-laws respecting the admission and registration of members in all matters relating to the discipline and honor of the Profession.

Fees.

To regulate and fix the annual and admission fees payable by members and to make all rules and regulations and by-laws necessary for the proper working or carrying out of the provision of this act.

Registration of Members.

(1) Any person practising the profession of heating and sanitation within this province on the coming into force

(2) In case any such person as aforesaid omits to be registered within said period of three months through absence, illness or inadvertence, such persons may, at the discretion of the society, be admitted to enrollment as a member.

Report From Quebec.

Quebec Vice-President Munday reported as follows:

"At last convention, you conferred the honor of vice-president of the Province



H. W. MUNDAY.

of Quebec upon me. Unfortunately, I have been prevented through unforeseen things, from fully attending to the duties of that important office. I have received about nine (9) letters from our good friend and secretary, Louis LeGrow, and all answered. I may state that I wrote Secretary LeGrow on Feb. 2, 1911, about the \$25 grant for the purpose of trying to organize the City of Quebec. I did not feel that it would be right to spend the association's money without first getting permission from the Executive Board. Not receiving any reply till April 5, 1911, which I enclose, I decided to go down, having a little business there at the same time. I thought I would try and kill two birds with the one stone. I spent three days there and called on most of the leading plumbers. The great trouble is jealousy among the trade. There being no examinations of plumbers, no by-laws, everybody can do as he likes. I explained to them, that by forming into a body, they could get satisfaction from the Health Department, but not if only one complained. Some of them were in favor of the idea, and others were indifferent. I personally think that a good French Canadian vice-president would be able to get them in line, as most of them are French, not only in Quebec City, but in smaller cities of the prov-

ince. So I would respectfully suggest a French Canadian as my successor.

"In connection with the Montreal Association we are progressing very well, owing to the fine body of officers who were elected this last term. They have done some very good work in connection with the Local Association which I could more fully explain if I were with you. Not being able to have that honor, I feel sure that my good friends who are with you will explain full details.

"I regret very much not being able to be with you this year on account of business, but hope to see you all at next convention. It is needless to wish you a good time because I know it is there, and if you don't get it, you have only yourself to blame."

Report on Essays.

The report of the Essay Committee was submitted by Chairman Farrell as follows:

"As Chairman of your Essay Committee, I have endeavored to correspond with a number of officers and prominent members of your association throughout the country, to get in touch with master plumbers who might be willing to deliver an essay at this convention, and, while I have received some replies, have so far been unable to get one to date. I regret this very much, knowing that an address on any subject relative to our business which might cover methods of starting out as a master plumber or steamfitter would be



R. J. SHANNON.

of this act may become a member of the Society by causing his name to be registered with the registrar of the society within three months from the appointment of registrar and by paying to the registrar such fees as may by by-law or otherwise be made payable in that behalf.



J. E. FARRELL.

a valuable feature of the convention. Forms of tenders, contracts, execution of same, accounting, collections, different methods and systems, etc., might also be discussed.

"I therefore trust that the next chairman of the essay committee will be more

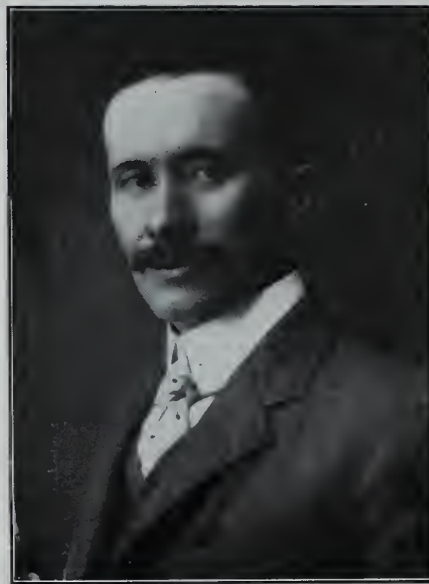
successful than I have been, as discussions on plumbing and heating at our conventions would not only be helpful from an educational point of view, but would go far to make our annual meetings a greater success."

Report From Alberta.

The report of Vice-President Young was read as follows:

As your Vice-president for the Province of Alberta, I desire to make the following report for the year ending with this convention. The plumbing and heating business in the Province of Alberta is in a flourishing condition. The whole West is in the throes of an almost unparalleled expansion, and Alberta is in the fore-front of this expansion. While this is largely a matter of natural growth, still we must attribute the extremely satisfactory state of the plumbing and heating business to proper organization among the masters; the largest centres of the province, (Calgary and Edmonton) being blessed in the fact of having live associations. I am pleased to be able to say that the Calgary association work has been productive of the greatest good, not only to the masters but to the community at large. The same statement applies to our sister city of Edmonton, the results attained there being of an exceedingly satisfactory nature. The only reason of there being less active results, showing up to the present time than at Calgary, is the fact of their association being of younger growth, and as all good movements are necessarily slow in their action, time will show results in Edmonton that will prove conclusively the value of organization among the plumbing and heating fraternity. Both of these associations are more or less affiliated with their respective builders' exchanges, but retain freedom of action in all matters pertaining to our craft. As an illustration of this I might mention that the Calgary Association at a full meeting on March 5th, 1911, did not feel it advisable to fall in line with the builders' exchange, to the effect of declaring open shop in all trades; and taking the matter in their own hands, met a conference committee of the local union of Journeymen Plumbers and Steam Fitters, and after several meetings, a very satisfactory agreement was arrived at. This agreement being for two years from the expiration of the present one, on July 1st. This action on the part of the Calgary association, had the direct result of swaying the majority of the members of the Builders' Exchange to our way of thinking, viz., that 1911 giving all indications of being the banner year in the building lines it would be foolish to force a labor war; and through this, agreements satisfactory to

all concerned have been signed up with all the building trade unions. This I consider a triumph for organization, as it shows conclusively that by working in unison we can control matters affecting the craft we specialize in; such control being practically impossible where there is no cohesion in action. The Calgary Association at their annual meeting of Jan. 10, 1911, by unanimous vote changed their name from the Calgary Master Plumbers' Association to that of The Calgary Association of Sanitary and Heating Engineers. This change has been satisfactory in all ways and no dissentient voice has been raised since the change. Another matter which has been a thorn in the side of the plumbing and heating contractor for many years and which the Calgary



E. J. YOUNG,

Association unanimously decided to take action on, was the matter of subcontracting.

A motion was passed to the effect that no member in future accept work on the basis of subcontract, demanding that in every case the contract for the plumbing and heating must be made direct with the owner or his accredited delegate, the architect. A notice was sent to the Builders' Exchange to this effect and also one to every architect in the city, with the result that the architects are in nearly every instance calling for separate tenders on our lines of work and we are gradually eliminating the general contractor from participation in profits in the plumbing and heating work on their buildings; profits which we feel should go to the man who has spent weary years in thoroughly mastering the trade which we specialize in. The great results of this action on the part of the Calgary Association is found in the guarantee to the plumber on buildings of all des-

criptions, as he now has to deal with the owner, and should the general contractor fall down on his contract there is no need for the plumber to appeal to a lien law, which, unfortunately, has proven to be very unsatisfactory in its workings. I think this elimination of the general contractor is a matter which could be very well taken up by the National Association as a body. The plumber, having been too long at the mercy of the general contractor, to say nothing of allowing the contractors to reap a profit from the work which he is totally unfamiliar with. The system of examination for both masters and journeymen in vogue in Calgary, has proven of inestimable value in the uplifting of the plumbing craft, and I am pleased to be able to say that Edmonton has also fallen in with the idea of proper examinations, and the city council has now under consideration a by-law governing this matter. The Calgary association held their annual banquet here on the 15th day of June 1911, and the affair was a very successful one. The primary object of bringing before the manufacturers, jobbers, the city authorities and the public at large, the aims and objects of the association in their efforts to uplift the craft being largely attained. The mayor in his reply to the toast of our city expressed himself as being highly appreciative of the efforts of the association to better the conditions in the line of sanitary arrangements, these conditions having such a large bearing on the general health of the community. In regard to our southern city of Lethbridge and our eastern city of Medicine Hat, I might say that the conditions are very satisfactory in the actual plumbing and heating lines, but the need of organization is very apparent, and this brings me to my suggestion in my report of last year, re the appointment of a salaried organizer, the need of such an official becoming more and more apparent every day. The west, especially in its exceedingly rapid growth and expansion, presents a field for organization that is particularly open, and now is the time for the plumbing and heating trade to be placed on a thoroughly organized footing, so that by force of unity of action they can demand, and ascend to their rightful place in the development of an up-to-date and thoroughly sanitary civilization. There is a large field open for such an organizer all over Canada as time stretches forward into the future, giving a vista of possibilities that cannot fail to arouse the enthusiasm of every one who has the interest of his chosen profession at heart. From local organization he can pass to provincial organization, and the value of provincial organization is so very apparent to thinking men that it

is not necessary for me to point out any of the benefits. I trust that this matter will be very thoroughly discussed at this convention and some definite arrangement arrived at, whereby we can be assured that at some future date the plumbing and heating trade will be an organization in Canada that we can be proud of. Another matter that I would like to touch on briefly in passing, and which I think is worthy of discussion, is the discouraging of manufacturers or jobbers from figuring on work, laying out plans for architects or owners, or taking quantities from plans. It seems a pity that men who have spent weary years in earnest endeavor to learn thoroughly their profession, should be subjected to a competition of this kind, that by the taking off of quantities from plans, and laying out of work for owners, it makes it possible for a man who has never advanced beyond certain stages in his profession; to take contracts, that without the help of the jobber or manufacturer he would not be competent to even figure on. If the wholesaler refrained from doing this it would necessitate a lot of these men improving themselves wonderfully in their profession, to the uplifting of the class of work in general. It would also eliminate the hardware dealers in country districts from butting into plumbing and heating, and it would open a field for the legitimate master plumber in rural districts that is of a very large extent. I think following this argument up, that it would be a good plan for this association to take up the matter of having a list copied of all manufacturers and jobbers who are in accord with the aims and objects of this association, and a copy of such a list be filed with every member, who can then use his own judgment in regard to dealing with these men. In concluding I am pleased to say that Alberta is advancing rapidly, and along the right lines. A few more local organizations, and then the provincial organization is the object which we all aim at, and from that it is merely a step to a grand national organization with all its possibilities and attendant blessings."

Select Committee Report.

The Select Committee reported as follows:

"We, the select committee, beg to report that we have carefully examined the correspondence of our National Secretary, Mr. L. LeGrow, and are pleased to say that he has done his work most faithfully, treating all his correspondents in a courteous manner and would, therefore, move a vote of thanks from this association for his most efficient services rendered for the past year.

"We would recommend that in future correspondence in reference to the

Capita Tax that the word "voting" be inserted between the word "per" and "member." The custom now being when writing an association for their capita tax, to simply state that their capita tax per member is \$3.00. This might be somewhat misleading and should in our opinion read that the capita tax per voting member is \$3.00."

H. Mahoney moved, seconded by A. C. Waltz, that the reports of the officers be referred to the resolutions' committee. The motion carried.

Before the meeting adjourned, Wm. Mansell called attention to the necessity of starting the meetings more promptly. The members had been very dilatory in getting around to the hall.

To Prepare Tender Forms.

J. E. Farrell moved, and R. J. Priestley seconded, the following resolution:

"Whereas it has been the custom of the trades to use the tender form supplied by the manufacturers for hot water and steam heating work; and whereas these specifications are not drawn up or worded in accordance with modern heating, engineering design and practice for the installation of heating systems. Therefore be it resolved that this convention assembled adopt this resolution and that a committee of three be appointed, to consist of J. E. Walsh, Montreal; R. H. Read, Regina, and J. E. Farrell, North Bay, to draw up hot water and steam heating tender forms and report on Wednesday morning.

POINTS ON TRAYS FOR THE LAUNDRY.

Editor Plumber and Steamfitter,—As I am just starting in the plumbing business and desire to get all the information possible, I wish that you would

print a little information as to the trays in the laundry. Have not had so very much experience along this line and the information would be very acceptable.

TIP.

If you observe the points following, we believe that you will not go wrong or get into any unnecessary difficulties.

See to it the material for the trays is of such substance that after having been used it will not become water soaked or roughed up. Place the trays so that they are good and solid. Nothing is more annoying than trays that are jumping around when any one is working at them. The use of the wringer on the tray should not make it move; but it does, sometimes when they are set up in a slimsy manner.

Do not run less than three-quarter pipe in size to the trays. People want plenty of water quick when they are in this department and at work. Use hot and cold water bibs that come out but a short way into the trays. The room is limited, anyway, and there is no occasion for putting on bibs that will "bark" the hands on the one that must use the tub. The waste should not be less than one and one-half inches in diameter and a proper strainer should be provided.

Put the trays in the light, if possible, and arrange so that they can be reached from all sides, and make sure that the trap will not loose its seal.

George W. Richardson, 195 Adelaide St. W., Toronto, is presenting probable customers with blotters in which they are advised to "Keep Cool! If you have trouble with your plumbing, don't get excited—just call up Richardson, The Plumber. We have experienced men who will at once relieve you of your worries."



A TWIN CITY GROUP.

Reading From Left to Right: J. Fewen, L. Grein, J. Carter, Billy Downs and Inspector McNamara.

"KING" Boilers



IMPLICIT CONFIDENCE may be placed in the Heating Apparatus bearing the name

"KING"

A BOILER that has all the improvements and *modern* in every department.

A RADIATOR that is guaranteed to be perfect and that has proved its worth by the ever increasing demand.

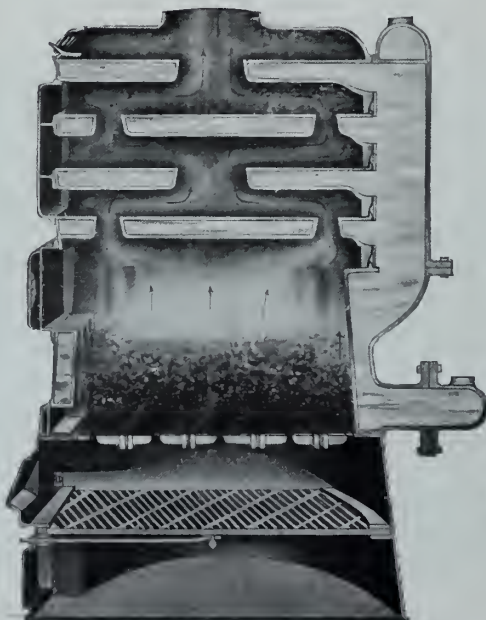
"KING" Boilers

are more easily operated than any other Boiler and more economical in the consumption of fuel.

Here are a Few Reasons Why!

The "KING" Fire Pot has a wide corrugation which extends the heating surface one-third and insures the proper combustion of the fuel around the outer edges.

Note the ample combustion chamber in fire pot and between sections and the staggered arrangement of flues, which compels the gases to be burned, and forces the intense heat to come in contact with all direct heating surfaces before escaping to the chimney.



STEEL AND RA

Toronto Showrooms, 80 Adelaide St. East

and Radiators

There are no obstructions to rapid water circulation in "KING" Boilers, which, in part, explains its phenomenal success in this respect.

An easily operated boiler means a satisfied customer.

The "KING" grate and shaking apparatus is the simplest yet produced.

There are NO BOLTS, PINS or NUTS to get lost or out of place in its construction, and the grates operate with the slightest motion of the shaker handle. There is absolutely NO LOST MOTION.

"KING" Radiators

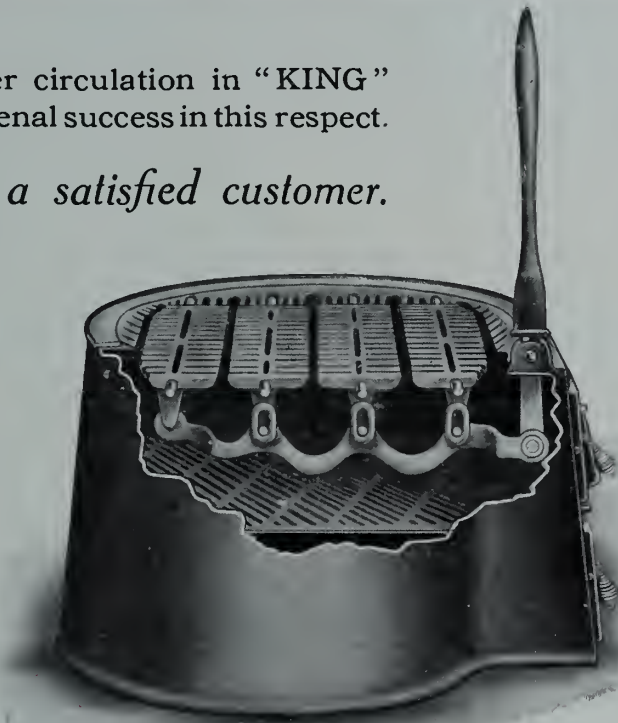
Are so well known to the Trade and have given such entire satisfaction to all who have used them that the demand is increasing every day.

"KING" Radiators are made in a very wide range of both plain and ornamental patterns.

We desire to call special attention to our five-column window Radiator which is rapidly growing in favor.

Give your customer the BEST by installing "KING" Boilers and "KING" Radiators. You will be well repaid.

Get our handsome heating booklet "**COMFORTABLE HOMES**"



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A group photo. of the delegates at the sixteenth convention, taken at the front of the Agricultural Hall, on Tuesday afternoon. Quite a number were not present at the time and were not included in the group.

Name of Association Changed by Unanimous Vote

Will be Known in Future as "Canadian Society of Sanitary and Heating Engineers"—An Important Step Forward Taken—Resolutions Committee Report.

On Wednesday morning at 10 o'clock one hundred master plumbers entered the convention hall. At 12.30 one hundred sanitary and heating engineers left the hall. The much mooted and long discussed question of the change of name had been settled.

It was done unanimously. After a short discussion, the delegates voted to change the name of the association to the "Canadian Society of Sanitary and Heating Engineers," the successful culmination of the debate being greeted with loud applause. This step is one of the most important taken in many years by the national association and it is believed that it will mark an important milestone in the upward climb of the trade.

There was a full attendance when the roll was called. A determined effort was made from the start to get through with as much as possible of the great volume of business remaining to be done.

To Draft Greetings.

A committee, consisting of R. J. Priestly, P. Ogilvie and J. W. Robinson, was appointed to draft a telegram to the American Association of National Plumbers.

Invited to Montreal.

A wire was read from Mayor Guerin, of Montreal, inviting the association to convene in that city next year. The invitation was greeted with cheers.

Provincial Work.

A letter was read from G. F. Frankland, secretary of the Ontario Society of Sanitary and Heating Engineers, referring in a very comprehensive way to the necessity for provincial and local associations. It was passed on to the reso-

lutions committee, on the suggestion of vice-president Walsh.

To Meet in Winnipeg.

P. J. Sheehy, Calgary, wrote to the president, suggesting that the western delegation, comprising the Edmonton, Regina, Calgary and Saskatoon representatives, meet the Winnipeg Association in that city on Saturday for the



WM. MANSELL,

Who Took a Prominent Part in the Convention Proceedings.

purpose of furthering the interests of the association at large and more particularly the interests of the west.

The idea was regarded as a splendid one and full power was granted to the western representatives to arrange the same. On the motion of Messrs. Priestly and Maxwell, the president was em-

powered to wire to vice-president Thomson, of Winnipeg, making an appointment.

Manufacturers Draw Plans.

C. Beckingham, Soo Ste. Marie, put in a resolution, seconded by P. J. McGuire, providing that all members pledge themselves to report to the national officers any supply firm or manufacturer who prepares a bid, specification or plan for the owner of property or others.

Mr. Priestly did not think the manufacturers should make plans for anyone—not even for master plumbers. If a master plumber could not draw his own plans, he shouldn't be in the business, (Hear, Hear!) For his part, he did not think the resolution went far enough.

A. Cameron asked if the resolution would bar manufacturers from making plans for architects. He did not think that any harm was done in such cases.

J. E. Farrell thought that it would be quicker to refer all such cases to the provincial officers, rather than to the national. He did not see that the association could in any way interfere with manufacturers who drew plans for architects.

J. Watson, Montreal, thought that the matter should rest with the local associations.

A. Cameron took issue with Mr. Watson. He thought that good results could be secured by dealing with the problem in the broadest possible way.

Mr. Priestly took the same view.

Mr. Beckingham explained that he did not intend the resolution to refer to architects.

President Cooper thought that greater weight would be given to the resolution if it were adopted by the national. He stated that some manufacturers did worse than draw plans; in many cases, they actually put in bids under the name of some mechanic. They often put in bids so low that the unfortunate man

handling the contract for them made not a cent for his time and trouble. (Hear, Hear!)

Mr. Cameron suggested that a committee be appointed to retire and frame up a resolution to cover the case to the satisfaction of all. It was decided to wait, however, until the report of the resolutions committee had been received.

Resolutions Committee Report.

The report of the resolutions committee was then read as follows:

"Your committee beg leave to report. re president's address:

"Your committee recommend that clause 1 be thoroughly considered by the convention.

"We recommend that clause 2 be adopted.

"We also suggest that the incoming executive be required to carry out this recommendation as soon as funds are available.

"We would recommend that clause 5 be favorably considered by this convention and that the name adopted be the Canadian Society of Sanitary and Heating Engineers.

"We recommend that this convention pass a motion, conveying the sympathy of this meeting to Mrs. Ross and that the secretary be instructed to draft a letter of condolence, conveying the sympathy of the Master Plumbers of Canada to Mrs. Ross in her bereavement.

Re Vice-President's Report:

"We recommend that the report from Vice-President Walsh be considered as a whole and be debated upon by the committee.

"Re secretary's report:

"We beg to recommend that the secretary's report be handed to the incoming executive or by-law committee for their serious consideration and adoption.

"Re report of F. Dexter, Nova Scotia:

"We beg to draw the attention of this convention to the fact that Nova Scotia is the first province in the Dominion to grant the master plumbers a provincial charter and strongly advise the different provinces throughout the Dominion to follow their action as soon as possible and that the national secretary secure from Mr. Dexter a copy of their charter for the guidance of the other provinces.

"We would recommend to the convention that the request of the vice-president from Quebec in regard to their representative for next year be acceded to and that the delegates from that province be allowed to name their choice for office.

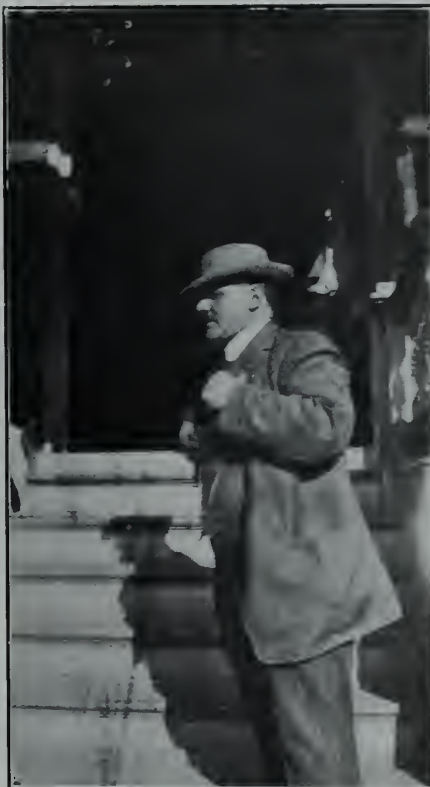
"Re Ontario vice-president's report:

"It is good to hear that Ontario has seen fit to support the efforts of their vice-president in organizing a provincial association and that they are following in the footsteps of Nova Scotia, and hope before our next to hear of their

having secured a charter of incorporation.

"Re Manitoba vice-president's report:

"We beg to commend Winnipeg and particularly R. Thomson on getting that city into line again and hope before our next meeting the province will have its organization. We wish to recommend



Ed. Higginbottom, the National Treasurer, Waiting for the Arrival of the Calgary Contingent.

the national secretary to secure a copy of the employers' and employes' blanks, for the benefit of our different local associations.

"Re Vice-President Young's report for Alberta:

"We recommend that the report be considered in convention, as it embodies so many splendid ideas and we take pleasure in commending the industry, energy and enterprise of Alberta province.

"Re letter of secretary Frankland, of the Ontario society:

"We would recommend that this letter be filed for future reference, as we feel from the many expressions at the convention that the time has arrived when the name of the organization should be changed and the by-laws amended.

Signed HARRY MAHONEY,
Chairman.

G. F. McKNIGHT,
WM. MANSELL.

Discussion of Report.

It was decided to take up the report clause by clause.

With reference to the clause in the president's report, referring to the granting of two year terms to officers, J. A. Gordon suggested that, as this was contrary to the constitution, notice of motion would be required.

President Cooper read clause 14 of the constitution, showing that the regulations had been complied with.

Both Messrs. Mahoney and Mansell spoke in favor of the idea. Mr. Mahoney declared that, if the name of the association were changed, it would be necessary to draft new by-laws and a change in the length of term could then be incorporated. He believed that it would be necessary to have the by-laws revised and brought in at the next convention.

Clause 1 of the president's report was referred to the incoming executive. Clause 2, referring to the need for an official seal or crest—was carried unanimously.

The Name Changed.

When the clause relating to the proposed change in name came up, Mr. Mahoney moved its adoption, seconded by P. Ogilvie. Mr. Mahoney suggested that the new name be "Canadian Society of Sanitary and Heating Engineers."

J. E. Farrell suggested that a committee be appointed to draft up a preamble giving reasons why the change in name was being made, said preamble to be made public.

H. Mahoney said that the change was being made because it would give a better prestige to the trade, and not in order to "cover a multitude of sins" as had been suggested.

Wm. Mansell spoke along the same line, stating that the word "plumber" was a misnomer, inasmuch as it did not cover the trade as to-day constituted.

J. Watson stated that the Montreal



E. J. Young, of Calgary, is highly interested in motoring. If the convention goes to Calgary, his machine will be much in evidence next year.

Association had instructed their delegates to favor the change in name.

The clause was adopted without a dissentient vote. The result was greeted with great applause. It was decided to draft the preamble suggested by Mr. Farrell.

Resolution of Condolence.

The clause, referring to a resolution of condolence to the widow of the late Robert Ross, was adopted by a standing vote. H. Mahoney spoke feelingly, referring to the sterling qualities of the deceased.

Important Clauses Adopted.

Vice-President Walsh explained that his idea in submitting the suggestions in his report had been to get matters on a more systematic basis. It would be wise to have the date and place of convention settled six months ahead of time so that the officers and the delegates would be able to have themselves prepared. He wanted each local to know just what was coming up at the convention, so that the various topics could be discussed. The delegates would then come to conventions well posted and authorized to vote for their locals.

H. Mahoney moved that all the suggestions in Mr. Walsh's report be adopted.

J. Watson seconded the motion. He stated that the trouble in the past had been that the by-laws had not been carried out. This carried.

J. E. Walsh suggested that the by-laws be printed and a copy sent to each member.

J. Marr did not think this possible at the present time, as the association was in a transition stage. Next year the provincial bodies would be organized and it would be possible to redraft the constitution and by-laws and then have copies printed.

The motion was adopted.

Mr. Mahoney moved, and Mr. Ryan seconded a motion, adopting the report of Secretary Legrow with the suggestions contained.

J. Watson thought that provincial associations should apply to the national before taking steps for charters. The national should remain the head body and govern both local and provincials.

Mr. Farrell said that the new by-laws could be drafted to cover that phase.

All other clauses, except that relating to the report of the Alberta vice-president, which was left over for discussion were adopted and the convention then adjourned.

eral incidents where losses had been sustained.

A. C. Waltz thought it was just about time that the trade took some steps to remedy this evil. Severe losses were continually being sustained.



The Soo did nobly. There are five master plumbers there, and all of them closed up shop and went to the convention. Here they are: Top row, left to right, Sid Adlard, J. A. Stone, J. P. McGuire; second row, D. Derry (Gurney Foundry,) Barnes and A. W. Allen. The profile picture is that of Charley Beckingham.

A Paid Secretary to be Appointed for Dominion

Delegates Resolutely Fought Down Obstacles and Finally Found the Ways and Means to Pay the Salary — Another Busy Day Spent.

The Thursday session proved quite as important in its bearing on the future of the trade as had that of the previous day. Although numberless obstacles arose the delegates resolutely fought them down and, before the convention finally arose the ways and means had been found to finance the appointment of a paid secretary. Organizers will be appointed in each province as soon as possible.

The session lasted from 10.30 until 3.30, with twenty minutes off for sandwiches and coffee. After refreshment, the delegates returned eagerly to business and, by the time an adjournment was reached, the bulk of the business had been transacted.

The first item of business was the consideration of the report of the resolutions committee in its bearing on the annual report of Vice-President Young, of Alberta. The discussion waxed interesting at times, particularly on the score of the general contractor.

Harry Mahoney touched on the question of the general contractor, stating that it was only fair that the owner or architect should go to the trade direct for figures instead of going to the contractor, as is so often the case. The

way to overcome this difficulty was to refuse to figure for a contractor. The resolutions' committee had felt that this point was worth emphasizing.

J. E. Walsh touched on the same point, telling what the local association in Montreal had been doing in that respect. Mr. McVeigh and J. A. Gordon told of steps that had been taken to eliminate the general contractor and to protect the trade.

Edward Higginbottom told how the situation had been met in Fort William. There had been considerable difficulty as a result of the poor class of men who had posed as general contractors. He himself had sometimes lost as a result of the failure of general contractors to carry out their obligations. For a time, they had refused to figure with contractors but had finally been compelled to go back, as a result of the unwillingness of some members of the trade to join the association for fear of losing their connection with certain builders. The benefits had been greater, however, when they figured with the architects and builders.

J. E. Walsh stated that one man in Montreal had been put out of business by the general contractors. He cited sev-

E. J. Young told of one instance where a general contractor had sublet a \$1,000 heating job to the speaker. The owner had paid the contractor in full and the latter had liquidated his debts, not paying the speaker a cent. The contractor advised him to put a lien on the goods but this had not been found feasible.

J. A. Gordon stated that it was necessary to place a lien within thirty days of the completion of the house.

P. Ogilvie declared that the lien law had been a great benefit in Quebec. If the plumber notified the owner in writing, the latter could not pay the general contractor one cent of what was due the plumber except at his own risk.

Harry Mahoney declared that all provinces had different lien laws and they were all a disgrace. (Hear, hear!) He thought that the only way for the plumber to protect himself was to deal direct with the owner.

J. E. Farrell thought that if the convention drew up a request, or made it even stronger and voiced a demand to the architects of the country to eliminate the general contractor, they would pay heed to the matter and see that the conditions were remedied.

R. J. Priestly declared that certainly the lien law in Alberta was a disgrace.

It did not give the protection to the plumber that he was entitled to.

J. Marr entered a strong protest against the present system which allowed the general contractor to make profits on the experience and skill of the plumber. He believed that the plumbers should organize and make themselves strong enough to eliminate the general builder.

A. C. Waltz declared that the plumber was at the mercy of the contractor as things stand at present. He believed that Mr. Farrell's idea was a good one. The association in Canada was not strong yet and they had to go slowly but he would be glad to second a motion to show to the architects the unfairness of present conditions.

Mr. McVeigh pointed out that the custom of working with the general contractor was a prime factor in price cutting. The contractors very frequently peddle the work around and give it to the lowest bidder.

Harry Mahoney moved, seconded by A. Cameron, "that the members of the Canadian Society of Sanitary and Heating Engineers, as far as possible, submit tenders direct to the architect or owner."

J. E. Walsh thought that the convention should pass a strong resolution, refusing to tender under general contractors and commending the matter to the attention of each local. He did not think Mr. Mahoney's resolution was strong enough.

Wm. Mansell and J. Marr took the same view.

Mr. Mahoney withdrew his resolution and moved that Messrs. Walsh, McVeigh and Farrell be appointed a committee of three to draw up a suitable resolution, and report back to the convention. The motion carried.

Architects' Advertising.

A. C. Waltz thought that some means should be devised to stop architects from advertising for tenders. In a great many cases, they did it to advertise their own business.

President Cooper.—"I don't see how we could stop them. We might ask them."

Mr. Waltz.—"We could approach them on the matter."

On the motion of Harry Mahoney and A. Cameron, the report of the resolutions committee was then adopted.

Report on Sub-Executive.

The select committee reported as follows:

"We beg to report as follows on sub-executive report of August 31, 1910:

"That in the matter of appointing a permanent salaried secretary, the time is now ripe for this association to employ a salaried secretary and organizer, that the work may be carried on more aggressively.

Sub-Contracting.

"Local associations should, in the opinion of this committee, adopt the plan of dealing direct with principals and in this way eliminate the general contractor and his profits which rightly belong to out crafts.

"In the matter of job work prices, it should be the first duty of every local association to adopt a uniform price list consistent with local conditions.



"Jaimie" Marr o' Calgary, is a member of the "old guard." He has been a strong association man for many years, both in this and the old country.

"In dealing with the subject of amalgamation with dealers' exchanges, this should be left to the convention to be dealt with.

"In the matter of conducting a plumbing business, we would recommend that every effort be made by the national as well as provincial association to educate the trade generally on the cost of conducting business, it is a well-known fact that the average plumber is in the habit of overlooking his overhead expense in making up his estimate."

On the motion of H. Mahoney and A.

Cameron, the report of the select committee was received and filed.

Provincial Organizer Suggested.

The special committee appointed to report on ways and means to engage a paid secretary and organizer brought in two recommendations.

1. We beg to recommend that, owing to the present difficulty in raising sufficient funds and the immense territory to be covered, that each provincial association take up the work of organizing the trade in each province and obtain a provincial charter.

2. That, in view of the fact at some future time, it will be necessary to have a national secretary, paid by the Canadian Society of Sanitary and Heating Engineers and that it is necessary to find ways and means to meet this expense, an entrance fee of fifty dollars be assessed against all local organizations joining this association having ten or less members, over ten members the entrance fee to be at the rate of five dollars per member.

The per capita annual tax after affiliation to be at the rate of three dollars per member.

The Discussion Starts.

Wm. Mansell explained that if one man were appointed for the whole province he would have so much to do that necessarily some provinces would be neglected. Each province could look after its own territory more thoroughly and at less expense.

Mr. Marr thought that perhaps it would be a better plan to let each province look after its own work and he was therefore prepared to support the idea.

Harry Mahoney explained that on the other side each state had its own secretary and organizer. The national secretary in a way superintended the work and gave the state organizers every assistance. One reason why he favored the committee's report was the long time it would take one man to organize the whole Dominion. Alberta would appoint an organizer and he felt sure that Ontario would do the same and that the other provinces would fall into line.

Secretary LeGrow stated that, after sixteen years of association work, it was doubtful if they were much farther ahead in point of organization. He believed that what was needed was a central officer, or body, to direct the affairs of the whole Dominion. "There are millions of dollars represented here," he declared. "Surely it would be a small thing for us to spend a few hundred dollars to pay an officer. If we have a man working right along, he will create and keep up interest and we will soon have all the provinces organized thoroughly."

Mr. Priestly thought it a good idea to have a permanent national secretary,

who would not necessarily need to act as an organizer.

Mr. Mansell then read the second of the resolutions submitted by the special committee as a result of their deliberations, which provided for an increased per capita tax.

Mr. Marr believed that the plan was a good one. He thought that the per capita tax could be paid in advance so that immediate action would be possible.

Mr. Mansell suggested that the scheme could be financed by securing loans from such of the members as were ready to put up \$50 or \$100 to get matters started.

Mr. Ogilvie suggested that it would be best to provide for the maintenance of the office permanently. He thought that the per capita tax might be raised.

Harry Mahoney contended that, even if the convention passed a resolution that all dues must be paid in advance, only a few locals would comply. Consequently, they would find, if a salaried official were appointed this year, that they had no funds to pay him before the year was out. He felt certain that things were moving so rapidly that next year all dues could be paid in advance and a permanent official appointed.

"We are starting out in a new business," declared Mr. Marr, "and we want to make it go right from the start. We must make up our minds and get down to business and appoint an official now. We can guarantee his salary. It is the smallest matter of the whole thing."

J. E. Walsh suggested that the establishment of a board of directors, as recommended by Secretary Legrow, would probably do for the coming year. Such a board might be established at Toronto, with Mr. Legrow to continue as secretary.

"Not on salary," said Mr. Legrow. "I am making all the money I want now." (Laughter.)

Mr. Legrow moved that the report be received and referred to the incoming executive and that, if they found the means to raise the salary, they be empowered to appoint a secretary.

J. Marr contended that the passage of this motion might amount to shelving the whole question. "We are here to settle this matter here and now," said Mr. Marr.

J. E. Walsh—"If the special committee could not find ways and means to raise the money, how could the executive? We must thresh this out here."

Mr. Legrow withdrew his motion.

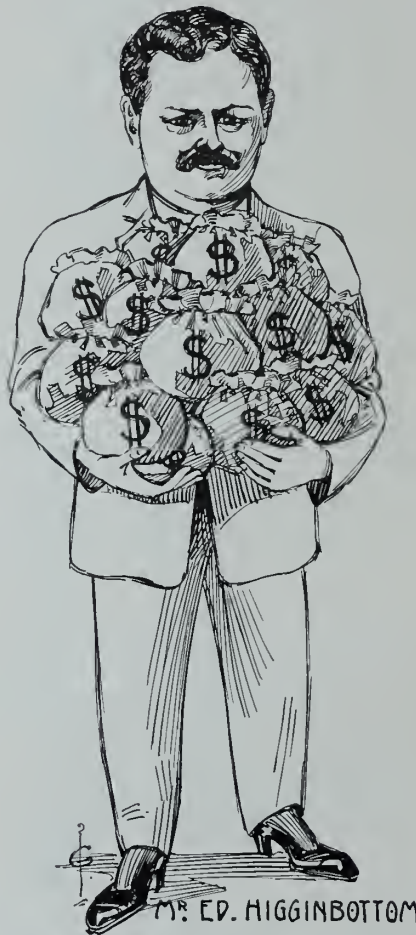
"If you don't have a paid secretary, to attend to matters for the provincials and locals, what have you to offer them in return for their per capita tax?"

asked J. E. Young. He argued that the matter should be regarded in an optimistic way, as there should be no difficulty in raising the funds.

He moved that an assistant secretary be appointed to help the secretary in looking after the routine work at a salary not to exceed \$600. Mr. Priestly seconded it.

"We can get the money," declared Mr. Mansell. "It is better to get a good man and pay the money."

Assurances were received from various delegates that their locals would advance their share of the expense. The



Treasurer Higginbottom held up the delegates for their dues.

ice seemed broken and word came from all corners of the hall that the money would be advanced. Consequently the motion carried unanimously.

"The best work done in sixteen years," said the president.

The report of the special committee was then referred to the ways and means committee with a vote of thanks to the members. The second clause, with reference to the changed per capita tax, was, on the motion of Wm. Mansell and P. Ogilvie, made a clause of the new by-laws, to take effect at once.

Strong Resolutions.

The committee, appointed to draft a resolution covering the general contractor situation, reported as follows:

"Be it resolved that every sanitary or heating engineer who is a member of, or affiliated with this association, will in future refuse to tender for or accept work on a sub-contracting basis, but must in all cases look to the owner or his accredited delegate, the architect or engineer.

"Concurring in this motion, we would recommend that the following letter be sent to the architect or the architectural chapters, as well as the public works departments of the Dominion and provincial governments.

Gentlemen:

The Canadian Society of Sanitary and Heating Engineers in convention assembled, decided unanimously that, considering the unsatisfactory results accruing from the practice of doing work on a sub-contracting basis, that in future the Sanitary and Heating Engineers of Canada would decline to tender on, or accept work on a sub-contracting basis. Following this decision we would request that in future, when calling for tenders on any building or buildings under your supervision, that you call for the plumbing and heating separate from the general building contract.

This will place the Sanitary and Heating Engineers in direct touch with the architect or engineer who, being a professional man is necessarily conversant with the technicalities of the installation of sanitary and heating appliances; and the direct results will prove of great benefit to all concerned.

Thanking you for your consideration of the above, we are

Yours very truly,
Canadian Society of Sanitary and Heating Engineers.

Subsidiary Report.

That a copy of the foregoing motion and letter be sent to every local organization and, where possible, to individuals outside of such organizations requesting them to fall in line with this movement.

On the motion of Messrs. Mahoney and Ogilvie, the report was adopted.

Audit Committee Report.

The audit committee reported having gone over the treasurer's books and found them to balance as follows:

Receipts on hand, Aug. 31, 1910...	\$236.98
Receipts	431.77
	\$668.75

Disbursements	11.90
Leaving balance	\$656.85
Cash in Bank	\$641.85
Cash in hand not deposited	15.00
	\$656.85
Signed	J. E. FARRELL, WM. BANBURY, W. J. EVANS.

Form of Specification.

The committee appointed to draw up a form of specifications for plumbing and heating work, placed on the board a copy of an agreement which was recommended to the use of all members. A copy will appear later.

Messrs. Mansell, Priestly and Ogilvie were appointed as a nominating committee.

Invited to Calgary.

The following telegram was read from the mayor of Calgary:

Calgary, June 14.

"Appreciating as we do the importance of the sanitary and heating crafts

in the advancement of civilization and sympathizing with the aims and objects of your national association in their endeavor to further and uplift the aforesaid crafts, I take great pleasure in extending the heartiest invitation for the National Association to hold their next annual convention in our city of Calgary assuring them of a hearty welcome to sunny Alberta and the city of splendid promise.

J. W. MITCHELL, Mayor."

Mr. McVeigh suggested that each provincial vice-president be given the power to appoint others in his own province to assist him in his work. They could form an advisory committee.

Harvey Mahoney moved "that the manufacturers and supply houses be asked to sell heating and plumbing goods to the trade only and that they be advised that we have over one hundred delegates in attendance at our sixteenth annual convention." Mr. McKnight seconded it.

The resolution was adopted after some discussion and the meeting adjourned.

ances, all delegates seeming unanimous in their approval of the idea. It was pointed out that the difference in regulations in certain cities led to much confusion when men from one place started work in another. It also led to differences in prices which appeared inexplicable to the public.

The recommendations were referred to the incoming executive, and commended to the serious attention of the new officers.

Heating Specifications.

A committee of three, consisting of Wm. Mansell, J. Watson and R. J. Priestly, was appointed to go over the drafts of heating specifications submitted by J. E. Farrell.

The committee returned with the following report: "It is impossible to formulate stereotyped specifications to cover our whole Dominion, and would recommend that, since merging into a Society of Heating Engineers, too much care cannot be exercised for the protection of our calling. And we would suggest that each local association should draft a form of specification suitable for their location, or that each provincial association should appoint an advisory board to thoroughly deal with this weighty question. We also suggest and recommend that the protecting clauses be inserted in all specifications. We also recommend that a chairman be appointed at this convention similar to the chairman of sanitary and other committees."

E. J. Farrell contended that the specification forms drafted should be adopted as a suggestion for the use of members of the trade. It would assist in eliminating the practice of manufacturers figuring and drawing up specifications for plumbers.

Messrs. Mansell and Priestly contended that it would be difficult to get a form which could be used in all parts.

"If we are going to draw up a specification form for this society," said Mr. Mahoney, "we should see that our form is the best possible. We are on the right road, but I don't think we should hurry along the matter."

"I don't write five specifications in a year," said J. A. Gordon. "The architects hand them to us in practically all cases."

Mr. Farrell—"You can never get a thing perfect."

Mr. Mansell pointed out that what was needed was a uniform basis of calculation. Specifications will sometimes differ by hundreds of feet of radiation for the same building. He thought the best men in the country should be secured to work out a proper basis.

A clause was added to the report that "the trade be advised to eliminate entirely the use of manufacturers' speci-

Officers Elected--Calgary Gets Next Convention

Important Business Done on Concluding Day — Apprenticeship Question Taken Up—Heating Specifications to be Drafted up.

The last session of the convention opened on Friday morning at 10.30, with a splendid attendance. A few only of the delegates had returned home and the rest had mustered strong to assist in the election of officers.

The usual grant of \$100 was made to Secretary LeGrow. "Then I won't put in for the year's expenses," said Mr. LeGrow.

J. E. Walsh stated that the sum was wholly inadequate. It did not in any sense compensate Mr. LeGrow for the work he had done during the year. However, it indicated the appreciation of the association

The Apprentices Question.

Wm. Mansell brought up the apprenticeship question, expressing the opinion that matters at present were in a deplorable condition. The question, he declared, had worried him for years. At the present time 75 per cent. of men preferred to work without help and consequently it was becoming hard to obtain labor. That, however, was not the worst feature. The poorest kind of mechanics were turned out as the result of the lack of a proper apprenticeship system. He read a form of indenture which he believed would remedy matters.

P. Ogilvie thought the matter was one of such importance that it would pay

to adopt the old principle of an apprenticeship for every man.

H. Mahoney moved that the indenture submitted by Mr. Mansell be embodied in the by-laws, and that the rate of payment be left blank. Mr. Laurier seconded it.

President Cooper thought that when a boy was starting his apprenticeship he should be paid so much a week, and that he should not be docked for holidays.

E. J. Young thought that each boy should pass a certain grade at school before being accepted as an apprentice.

Mr. Marr explained that in the West they preferred to take on full grown apprentices, who could be real helpers as well. He himself paid \$10 a week to apprentices the first year. Boys were often more of a hindrance than a help.

"The best men that I have in my shop," said P. Ogilvie, "are those who have been with me right along, starting as boys."

The motion was adopted.

Standardizing of Ordinances.

The Calgary delegation introduced recommendations to the effect that a national plumbing censor board should be established, and that steps should be taken to standardize the plumbing ordinances of Canada, as far as possible.

Considerable discussion ensued on the question of the standardizing of ordin-

ications in tenders for heating," on the suggestion of Mr. Farrell, and the report was then adopted.

A Suitable Preamble.

The preamble to the motion on the change of name was submitted by Mr. Farrell as follows:

"Whereas on the one hand we recognize that the health and sanitary conditions of our country depend largely on the mode of designing and the proper construction of sanitary fixtures and systems, the engineering requirements of which demand the highest possible knowledge of which ages of practice and experience have brought to the present high sanitary standard:

"And whereas the installation of heating and ventilating systems also demands a technical and engineering knowledge of a very high degree:

"And whereas we are often called upon for advice by owners, architects, engineers and boards of health:

"And whereas the term plumber implies a worker in lead, and owing to



J. E. Walsh gracefully accepted the presidency.

the fact that the use of lead is rapidly passing out of use in sanitary systems:

"We therefore believe that the term engineer as applied to our calling describes it more accurately."

This was accepted as a suitable explanation of the reasons for changing the name of the association, and accordingly was adopted.

Calgary Gets Convention.

Invitations were extended from Montreal, Calgary and the Twin Cities for the convention next year. After some discussion, in which much jocular and good-natured rivalry was displayed, a

vote was taken, and Calgary got it. The vote was made unanimous on the suggestion of the Montreal delegates.

Officers Elected.

P. Ogilvie submitted the report of the Resolutions committee, recommending a second term for President Cooper. On his withdrawal, Vice-President J. E. Walsh of Montreal was unanimously chosen president. The popularity of the choice was evidenced by the loud applause.

E. J. Young of Calgary was recommended for the vice-presidency, and was unanimously selected.

The committee recommended John Watson, Montreal, for the secretaryship. After some demur, Mr. Watson accepted the office.

The other officers were elected as follows:

Treasurer — E. Higginbottom, Fort William.

Vice-President, Nova Scotia—F. Dexter, Truro.

Vice-president, New Brunswick—Wm. Watson, Moncton.

Vice-president, Quebec — Jos. Thi-beault, Montreal.

Vice-President, Ontario — Lewis Le-Grow, Toronto.

Vice-president, Manitoba — Stanley Brick, Winnipeg.

Vice-president, Saskatchewan—Harry Potts, Regina.

Vice-president, Alberta—G. F. McKnight, Edmonton.

Vice-president, British Columbia—Left to the recommendation of Vice-president Young.

Jos. Barnes, Port Arthur, was suggested for the vice-presidency of Ontario, but withdrew on the plea that Mr. LeGrow would be able to do better work in Toronto.

Legislation Committee—H. Mahoney, Guelph (chairman.)

Sanitary Committee—J. Marr, Calgary (chairman.)

Apprenticeship Committee—Wm. Mansell, Toronto (chairman.)

Essay Committee.—J. Marshall, Port Arthur (chairman.)

Heating and Ventilation Committee—J. Priestly, Calgary (chairman.)

Officers Installed.

Mr. Mansell and Mr. Marr then escorted President elect Walsh to the chair amid applause. "I accept the presidency in the same spirit as that shown by the other officers," said Mr. Walsh. "I do not desire to shirk work—and the work this year will probably be heavier than ever before." He thanked the delegates for their expression of confidence.

Mr. Marr and Mr. Priestly escorted Vice-president Young to the front. Mr. Young thanked the gathering briefly and gave assurance of his intention to give his very best efforts to carrying out the duties of the office.

Mr. Ogilvie and Mr. Gordon escorted Secretary Watson to the front. "I will do my best," said Mr. Watson.

Date Left Open.

On the motion of Mr. Priestly and Mr. Mahoney, the date of the next convention was left to the incoming executive.

Mr. Mahoney moved that letters of thanks be drafted and sent to Mayors Guerin and Mitchell of Montreal for their kind invitations. Mr. Ryan, Montreal, seconded it. The motion carried.

On the motion of Messrs. Mahoney and Marr, a vote of thanks was passed to the Mayors of Port Arthur and Fort William.

On the motion of Mr. Ogilvie and Mr. Mahoney, a hearty vote of thanks was passed to the Twin City association. It was adopted by a standing vote.

Mr. Mahoney moved that a letter be sent to the municipalities of Port Arthur and Fort William, thanking them for the hearty welcome they had extended to the convention. The resolution carried.

On the motion of Wm. Mansell and Jas. Marr, a vote of thanks was tendered to Plumber and Steamfitter for its support and assistance in the past, the motion being coupled with a request that this paper act as official organ of the new association. T. B. Costain responded briefly.

At the conclusion, a vote of thanks was tendered to Macdonald & Sons for exhibiting their goods at the convention.

Banquet of Association Proved a Huge Success

Nearly Two Hundred Were Seated About the Festive Board—
Speeches and Songs Made Up an Interesting Programme —
Climax Reached in Efforts of Entertaining Committee.

The efforts of the Twin City committee to give the delegates a good time reached the climax in the banquet held on Thursday night in the Prince Arthur Hotel. It was attended by about one hundred and

fifty in all, the tables being laid in the handsome dining hall of the new C.N.R. hostelry. That the evening was a huge success goes without saying. A splendid dinner was served and the programme that followed possessed everything

desired to make the post prandial part both interesting and instructive.

The accompanying menu will give some idea of the lavish preparations that the local committees had made:

Oream of Corn.

Am I important? Well have a look.—Andy Waltz.

Olives. Spring Onions.

I did not make the Earth, but I made the Twin Cities. —Joe Barnes.

Boiled Lake Trout aux fines herbes.—Higginbottom.

Braised Ox Tongue. Le Jardines Stocks and Snippers.

While amongst us he is Young.—McDonald.

Roast Turkey with Red Lead Dressing and Smudge.

Stop Rais-in prices.—Entire Company.

Boiled New Potatoes. Hollandaise With Young.

Carrots and Peas. Calgary.

Mixed Pickles.

Cooper Walsh Gordon Priestly Marr Laurier Marshall

Ladles of Ice Cream—Sine

Deep Port Arthur Apple Pie. Fort William Cheese.

Demi Tassie Nipples.

An honest man is the noblest work of God.—Burns.

The chairman, A. Cameron, of Fort William, presided in an able way, and kept the long toast list from dragging.

The toast to His Majesty the King, was honored in enthusiastic manner, the gathering rising and singing the National Anthem.

The Twin Cities.

"It gives me more than ordinary pleasure," said J. E. Farrell, in proposing the toast to the Twin Cities, "to propose the health of our hosts during the past week. Never in the history of the association have we received a more hearty and royal welcome."

He complimented the two cities on their very clean appearance and their great facilities for advance and growth. The people, he believed, possessed the qualities most needed to make a community successful.

Aeting Mayor Dawson of Port Arthur, replied, prefacing his remarks with a humorous reference to the events of a few evenings before when the famous moek trial was held with himself in the chair. He paid a tribute to the members of the association, who had made such a splendid impression during their stay in the Twin Cities. His own relations with the visitors had been most pleasant.

Continuing, he dilated on the great growth and the unlimited prospects of the two cities. They were becoming immensely important centres which was clearly demonstrated by the fact that the Master Plumbers had seen fit to come for their annual convention. (Hear, hear!) He predicted that the time was not far off when there would be 100,000,000 people in the west.

Our Guests.

A. C. Waltz, Port Arthur, proposed the toast to "Our Guests" in a felici-

tous manner. The convention had exceeded their most sanguine expectations, he declared. He trusted that the delegates had all enjoyed themselves; and that when they returned home, they would carry away only kindest recollections of the time spent in the Twin Cities.

President Cooper, who responded to the toast, explained why the name of the association had been changed. It was not because they wanted to get rid of the name of plumber but because they believed that the new name best described their calling. There had never been a man in the country who had worked harder for less profits than the master plumber. (Hear, hear!) Conditions were being improved since association organization had been effected. He believed that the convention drawing to a close had done much to help along the good work. The speaker had been at six or seven conventions and he had never had a better time nor seen more valuable work done.

Secretary LeGrow paid a tribute to the good work done and the splendid entertainment shown at the convention. The opinion he now held of the west was a most remarkable one. Every person seemed to be full of optimism. They would give you anything you asked for. (Laughter.) He concluded with a humorous anecdote which created much good natured laughter.

The Architects.

Jos. Barnes proposed the toast to the architectural interests. "I can work," he declared, "but I cannot speak." He proposed the toast with a complimentary reference to the members of that profession.

Russell Halton, Port Arthur, responded, stating that he had felt some trepidation at standing up before so many plumbers. Sometimes it was hard enough to stand up before one. (Laughter.) He paid a tribute to the plumbing fraternity, particularly those of Port Arthur, who were deemed so entirely worthy that they had been allowed to draw up the civic plumbing by-law. He expressed the opinion that if some people would spend more on their plumbing and less on the outside of their houses, it would be much better altogether.

The Trade.

This toast, dedicated to the sanitary plumbers and heating engineers and supply houses, was proposed by Aeting Mayor Dawson.

Mr. Cronkwright, Fort William, in responding, congratulated the association most heartily on the success of the convention. They believed the change in the name was a most desirable one.

Harry Mahoney, Guelph, replied to the toast with the fluency acquired in long years of service at the council board of the Royal City. He referred to the long history of the craft, and commented on the reasons for the change of the name effected the day before. He cited a case to show the necessity for adequate sanitary arrangements in the home for the preservation of health. Continuing, he touched on a number of other prominent topics in connection with the trade, dwelling particularly on the necessity for stringent examinations.

The Travelers.

Ed. Higginbottom proposed the health of the traveling salesmen. "They are all a jolly bunch of fellows," he declared, "except when we are busy."

Replies were made by Ed. McQuillan and W. C. Heinrich.

Our Hosts.

"The real success of our association dates from to-day," declared Wm. Mansell, in proposing the toast to the "Associations of Master Plumbers in the Twin Cities."

Wm. Taylor proposed an impromptu toast to "Our sweethearts, wives and daughters."

The Press.

"For five hundred years we have been the butt of the press," said James Marr, in proposing the toast to the press. "Now the shoe is on the other foot. The plumber is no more. This may be a banquet, but it seems more to me like a funeral." (Laughter.)

Replies were made by T. B. Costain of Plumber and Steamfitter and the representatives of the local press

The Ladies.

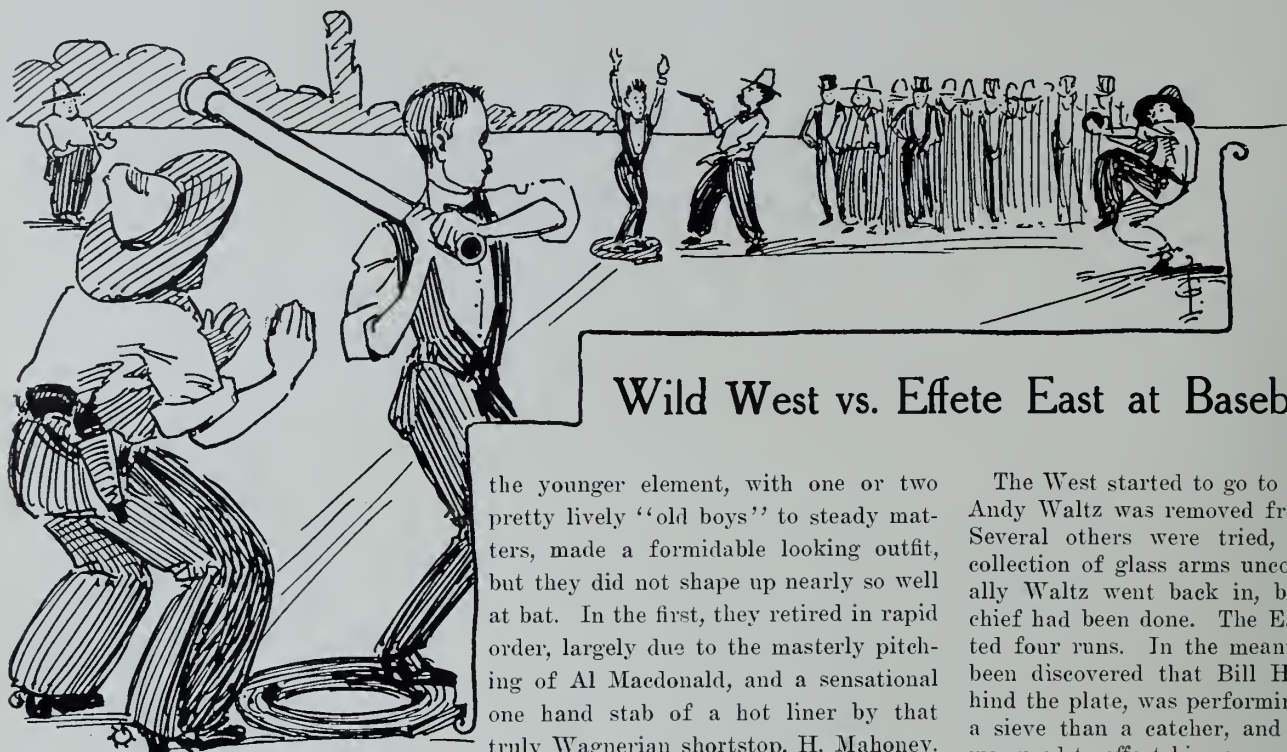
In proposing this toast, J. E. Walsh, who does not lack the truly Irish quality of wit as he amply demonstrated, coupled with it a toast "Our Hosts," speaking in heartfelt appreciation of the magnificent efforts of the Twin City Association to make the stay of the delegates pleasant.

E. J. Young responded in humorous and pleasant vein. Chas. Brewer, although called upon unexpectedly, also made a creditable response before he shifted the burden on to the shoulders of Joe Laurier of Montreal, who also rose to the occasion with a bright response.

Among the musical numbers were songs by Messrs. Brayley, Allen, Meyers and Watts. John Watson, Montreal, gave his famous rendition of "The Cat Came Back."

At the close addresses were delivered by M.H.O. Lawrie, J. E. Leonard, Montreal, and C. W. Webb.

Entertainment Features of the Convention



Wild West vs. Effete East at Baseball

The committees of Port Arthur and Fort William had prepared a most varied and interesting series of entertainments for the delegates. The feature of the whole week was the programme of sports held on Wednesday afternoon at the Arena grounds, Fort William. A baseball match between picked teams from the East and West was the "headliner" on the programme, and there was, in addition, a series of races and athletic events, into which practically all the delegates entered with zest.

A band had been secured for the occasion and an impromptu parade to the grounds was arranged, Jack Marshall leading the way with his arms full of prizes. A big crowd followed, there being many spectators present from the two cities.

The Ball Game.

With Umpires Marshall and Kinney in charge, the baseball game started. The Eastern team, which was made up largely of veterans, started off, and soon had netted a run. Al Macdonald rapped out a bingle, to use the proper phrase, and successively stole second, third and home. The West, composed for the most part of

the younger element, with one or two pretty lively "old boys" to steady matters, made a formidable looking outfit, but they did not shape up nearly so well at bat. In the first, they retired in rapid order, largely due to the masterly pitching of Al Macdonald, and a sensational one hand stab of a hot liner by that truly Wagnerian shortstop, H. Mahoney.

In the second, things became hot and heavy. Vice-president Walsh put down a liner to Potts, the Westerner's third baseman, but the big fellow went after it as though his feet had struck some tanglefoot, and the runner got first. From there he wandered around the bases, until the brilliant idea occurred to him to try to steal home. Unfortunately he tripped, and slid home on his ear, about two minutes after the ball reached the mitt of the catcher. Walsh had to retire, and Tassie took his place. In the same innings Harry Mahoney also tried to steal home, and was caught redhanded at the plate.

The West started to go to pieces when Andy Waltz was removed from the box. Several others were tried, and a fine collection of glass arms uncovered. Finally Waltz went back in, but the mischief had been done. The East had netted four runs. In the meantime, it had been discovered that Bill Heinrich, behind the plate, was performing more like a sieve than a catcher, and the derriek was used to effect his removal to another sphere of inactivity. Barnes—who, by the way, played with Detroit once—donned the mask and protector then.

The sensation of the day was the great double play pulled off by that pair of scintillating stars, Billy Downs and Bob Shannon. Downs had been playing in the cigar store Indian style up to the time that a two-bagger was sent in his direction. He came in to meet the fly like a hired man answering the dinner bell, clutched the sphere and held on to it. The man who had been on second was by that time well on to third, so Downs put the ball over to Shannon and effected a neat double play.



THE CHOR PRACTISED

AT MEAL HOURS —

The score was as follows:

EAST			
	Runs	Hits	Errors
S. Adlard, c	2	1	0
Macdonald, p	2	2	0
Mansell, 1b	0	1	0
Shannon, 2b	0	1	0
Walsh, 3b	0	1	0
Mahoney, ss	0	1	0
Beckingham, lf	1	1	0
Downs, m	0	1	0
Taylor, rf	0	1	0
Total	5	10	0

WEST			
	Runs	Hits	Errors
Rogers, 1b	0	0	0
Robinson, ss	0	1	0
Potts, 3b	0	1	0
Barnes, 2b	0	1	0
Sheehy, lf	1	0	0
Kennedy, m	2	0	0
Heinrich, c	0	0	8
Waltz, p	0	1	0
McCarty, rf	0	0	0
Total	3	4	8

Summary—East 5, West 3.

Sports Run Off.

The races started off with a one hundred yard dash, which Watts of Saskatoon won, with Anderson, Fort William, second, and "Sid" Adlard, Soo, third. Billy Downs came last. Time of winner, 9 2-5 seconds; time of last man, 32 3-7 seconds.

Downs spruced up some in the 100 yards sprint for supply men, winning hands down. Charlie Brewer got over for second prize, and Wilson third, with Bill Heinrich a safe last.

The fat man's race brought out a spirited, if somewhat ponderous, race for supremacy, between Barnes of the Soo and McQuillan of Toronto, which the former won by a nose. McDiarmid of Fort William got third, and last position was unanimously awarded to "little Jeff" Hunter.

Miss Routledge won the ladies' race, with Mrs. Higgins second, and Miss Hughson third.

The hop, step and jump event was won by Joe Barnes, Port Arthur, with 34 feet, 6 in.. L. Green was second and Evans third. Higginbottom was last man, with 26 feet (which included run of 22 feet, 9 inches.)

Evans, who had been dieting on grasshoppers for the event, won the running broad jump with 15 feet. Adlard was second with 14 feet, 5 inches, Downs third with 13.9, and Alex Cameron last with 10.9.

The three-legged race was captured by Green and Evans, the Fort William team. LeGrow and Costain were second and Watts and Wilson third.



THE GENTLER SPIRITS
WORKED OFF THEIR RIVALRIES AT BOWLS.

The fifty yard sprint backward was won by Harry Mahoney, with Watts, Laurier and Brewer capturing the other positions.

The Guelph man came along for first place in the veteran race also, with Joe Laurier a close second, P. Ogilvie third and Culliton last.

WEST WON AT BOWLING.

The West had complete and ample revenge at bowling, for the defeat suffered at baseball. The first round was closely contested, and some of the Easterners rolled large scores. In the second round, however, the mighty Shannon, who had been high roller in the first, was not on hand, and Al Macdonald, who had done some splendid trundling, was also an absentee. The East, therefore, fell off considerably, and the West carried off an easy victory.

First Round.

East—			
Macdonald	171	111	113
Webb	47	43	79
Maxwell	75	95	101
McMichael	120	112	103
Mahoney	111	136	85

Total ... 524 497 281
Team total, 1,502.

East—			
Farrell	94	130	
Taylor	138	117	
Cooper	119	95	136
Shannon	146	185	129
LeGrow	65	90	99
Regan	89		
Hunter			166

Total ... 551 581 660
Team total, 1,792.

East—

Costain	94	100	101
Ogilvie	84	113	97
Gordon	99	87	77
Watson	86	113	106
Mansell	101	118	97

Total ... 464 531 478

Team total, 1,473.

West—

E. S. Martin	146	135	108
McVeigh	96	121	121
Rogers	59	100	76
A. M. Berryman	120	183	140
J. Barnes	103	123	114

Total ... 525 662 559

Team total, 1,746.

West—

Barton	60	81	51
E. J. Young	136	113	98
Dunbar	104		
J. Preestly	86	94	108
Sheehy	117	133	182
Marshall		102	153

Total ... 503 523 544

Team total, 1,570.

West—

D. Anderson	121		
J. Marr	110	90	
J. C. McRae	73	105	
J. Silke	110	69	
A. C. Waltz	156		
McCallum		61	
Bombary		59	

Total ... 570 384

Third frame, 602.

Team total, 1,456.

Second Round.**Westerners—**

Martin	108	143
Sheehey	106	103
McKnight	106	103
Dunbar	138	118
McVeigh	107	171

Total 565 638

Team total, 1,203.

Westerners—

Preestly	162	77
Young	104	114
Watson	118	97
Marr	107	110
Rogers	109	110

Total 600 508

Team total, 1,108.

Westerners—

Potts	126	100
Hueston	117	123
Evans	146	110
Waltz	110	119
Barnes	167	105

Total 666 557

Team total, 1,223.

Western total, 3,534.

Easterners—

Taylor	110	118
Robb	70	96
Adlard	126	101
Archibald	77	93
Sellers	98	117

Total 481 525

Team total, 1,006.

Easterners—

Costain	119	81
Maxwell	120	109
Beckingham	79	79
Mansell	80	95
Mahoney	92	120

Total 490 484

Team total, 974.

Easterners—

Derry	58	
Gordon		110
C. Brewer	145	89
W. Ogilvie	93	
Watson		98
Hunter	106	129
Barnes	95	79

Total 497 505

Team total, 1,002.

Eastern total, 2,982.

PLEASANT YACHTING TRIP.

On Thursday afternoon the handsome steam yacht "Sigma," owned by James Conmee, M.P., was very kindly placed at the disposal of the local committee by Mr. Conmee, and a sail around the harbors of the two cities was enjoyed. A large party took in the sail, which extended over three hours, and included a trip several miles up the Kaministi-

qua River. Before starting, a group photograph was taken of the party for the city of Port Arthur.

THE THEATRE PARTY.

On Tuesday night all delegates and visitors were entertained at the Lyceum by the home committee. An especially good bill had been arranged and the members of the company were loaded up with advance information as to the character and peculiarities of every man in the party. In consequence, there was a steady run of "local hits" which amused the general audience as much as the plumbers themselves. There were enough jokes to go around with a few extra thrown in for "Bill" Henricks and Geo. Cooper.

Here were a few of the best: "I dinna drink mysel' but I sometimes tak a wee drap o' Seotah wi' ——— o' Calgary;" "You're not the only pipe under the sink." The climax was reached when a fat lady in a hobble and a blonde wig averred that George Cooper was her beau and gave a detailed account of their courtship. Even George had to join in the laugh.

BRIEF CONVENTION NOTES.

Alex. Cameron made a capital chairman at the banquet.

The Saskatoon and Regina representatives arrived Tuesday morning and were heartily welcomed.

W. R. Sime, of the local committee, was laid up and did not get around to the meetings until Tuesday.

The Calgary delegates stopped off Sunday night at Winnipeg on the way down and rounded up some of the 'Peg boys.

The resolutions committee worked for six hours straight ahead on Tuesday without even rising for refreshments. They did a tremendous amount of work.

The only exhibit at the convention hall was that of Macdonald & Sons, Toronto. A complete stock of their tools was shown, including their new wrench.

Joe Barnes only got about an hour's sleep Monday night. Until 4 o'clock he waited around the stations for trains, one of which was 3 hours late. Then at six o'clock he went down to the wharf to meet the steamer and it was four hours behind time.

Miss Susie Loughlin, a candidate in the Fort William Herald's popularity contest canvassed the meeting on Tuesday. The hat was passed around and each man dropped in his quarter—or more. The sum secured amounted to \$10.60 with which two yearly subscriptions were bought, one for McKellar's hospital, Fort William and the other for St. Joseph's hospital, Port Arthur. This netted Miss Loughlin 10,000 votes.

**THE LATEST MODEL.**

This shows Ed. Hig—otherwise Edward Higginbottom—in his latest model R racing car. It was constructed out of an old sawing machine, an engine, water barrel and some other objects not

necessary to enumerate. It was designed with an eye to appearance rather than speed. The man steering is Wm. Downs, Esq. Next in order is the proud owner of the machine himself and the others are Messrs. McNamara, Hewitt, Fewings and Allan Cameron.

Anecdotal---Funny Incidents that Occurred During the Convention

The best joke of the convention was worked on Tuesday night, with the active assistance of Acting-Mayor Dawson of Port Arthur and the police force. A certain traveler, whose identity need not be revealed, started to jolly a police officer. The constable resented it a little, but the traveling man, feeling secure in the promise of Acting-Mayor Dawson that the convention had the freedom of the city, did not desist.

The incident was seized upon by a coterie of practical jokers as a splendid opportunity to work an elaborate hoax. Blank—we will call the traveler by that name—was standing in the bowling alleys shortly after, when two officers walked in. "We want you," said one of them. Blank tried to beat a retreat, but was promptly nailed. To lend a touch of realism, Jack Marshall hurried up to the rescue. He protested not wisely, but too well, with the result that both of them were hustled off to the police court. Here Marshall was released, but Blank was held in durance vile until a magistrate could be secured to sit on the case. Acting-Mayor Dawson finally consented to act as "beak," and Blank was brought up before the bar. All formalities were observed, and Blank, who had been harboring some suspicion of the bona fide nature of the proceedings, visibly wilted when Mr. Dawson announced: "Three dollars and costs or thirty days."

"I've only got a little change on me," he said.

"Then you must serve the term," said Mr. Dawson.

However, Hary Mahoney put up the fine, and Blank was allowed to go. Half an hour after, he found out all about it, and spent an earnest couple of hours trying to locate the principals in the hoax, but they had gone into temporary retirement.

A Toronto quartette went for a drive around the two cities on Thursday evening, with sleigh bells on the horses. People rushed to windows and out on the streets to see if Kris Kringle had mistaken the season and come back six months ahead of time.

Ed. Higginbottom was driving a party in his new machine when he became involved in difficulties as a result of trying to smoke a cigar at the same time. As both hands were needed to drive the car, he did not pay much attention to the cigar and before long his tie was on fire. A big hole was burned in his tie and shirt.

It was Tag Day in Owen Sound on the day that the Toronto party arrived to take the boat. Highway robbers in the guise of young ladies haunted every corner. Hearing that the master plumbers were coming, a deputation of fair canvassers hied to the station and way-laid every member of the party. Harry Mahoney—true to his Guelph principles—nearly fell over the gangway in his efforts to escape, but two fair damsels collared him and made him pay a quarter extra.

Geo. Cooper, fearing mal de mer on the trip up, had taken in his grip a



A group of the Toronto party on the upper deck of the steamer "Assiniboia."

supply of that form of original sin which is done up in quart bottles. The cork came out—corks have a habit of coming out—and was not properly replaced. When George opened the grip again, he found that the medicine had saturated an article which can best be described as long, white and necessary. It had to be thrown overboard, and the genial president made "shift" as well as he could for the rest of the journey.

The singing of the quartette on Sunday on the upper deck was a rare treat but to change from "El Trovatore" to "Molly-O" was a pretty sudden transition from the sublime to the ridiculous.

LeGrow, Mansell, Mahoney, Webb, and Macdonald made a rattling good quintette. The liquid, flute-like notes of Al. Macdonald blended harmoniously with the stentorian efforts of first base (musical term, not baseball) Webb and

baritone LeGrow. Billy Mansell helped with both the high and low notes, and the man from Glengarry supplied a mellow undertone. In point of noise, the results were immense.

Lewis LeGrow had first his overcoat and then his cap stolen, recovering both with considerable difficulty. His experience recalls the trick played on Kenny Allison during the Winnipeg convention some years ago. His overcoat was coolly appropriated at Winnipeg, and Kenny was, as a result, in a highly apprehensive state on the score of sneak thieves. He went home by way of Chicago, and some of the boys wired on ahead to a couple of friends of his in the Windy City, to put up a trick on him at the station. One went up to greet him on the platform, and Kenny put down his grip to shake hands. The other promptly slid up behind and ran off with the grips. Kenny made a great fuss when the theft was discovered, and was, needless to state, highly relieved when the baggage was returned.

The Calgary and Edmonton contingent arrived on Monday morning bedecked in broad, fancy colored straw sombreros. They distributed blue badges to all the delegates.

CONVENTION NOTES.

There were enough delegates present to secure the single fare rate.

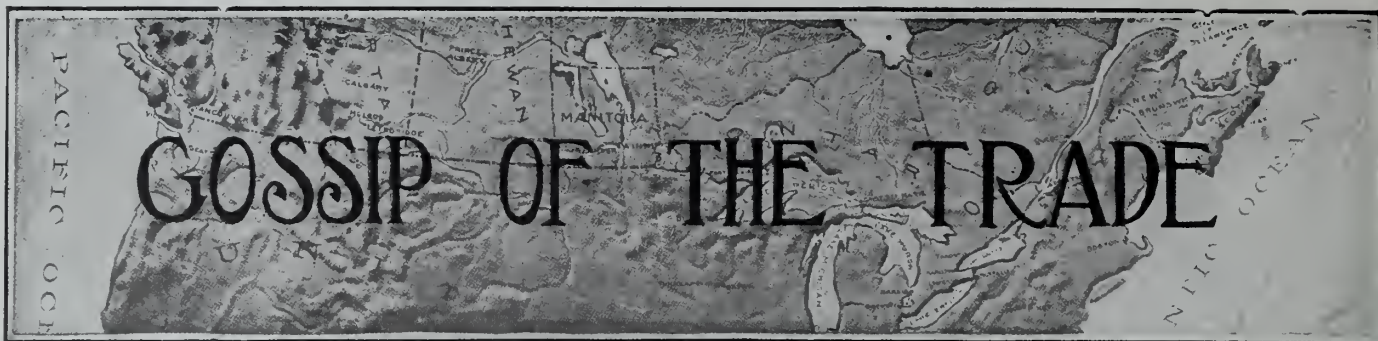
E. J. Leonard, Winnipeg, represented the Canadian Brass Company.

F. G. Johnson, Ottawa, sent in regrets for the association of the Capital. It had been found impossible to send a delegate.

Exhibits were shown in rooms at the Prince Arthur Hotel by the H. Mueller Manufacturing Co., Art Brass Co., Canadian Brass Co., and S. Sternan & Co.

A lunch counter had been established at the convention hall at the expense of the local committee. Sandwiches, lemonade, coffee, pie, fruit and ice cream was served free at all hours. It was well patronized.

Jos. W. Barnes, the indefatigable chairman of the advertising and correspondence committee, deserves a large share of the credit for the success of the convention. He sent out over 3,000 letters to plumbers in all parts of the country.



Has Opened Shop.

Ralph E. Pope, an experienced plumber and tinsmith, has opened a shop at Phoenix, B.C.

Opens Branch Shop.

H. E. Pickard, who runs a plumbing and tinsmithing business at Viking, has opened a branch at Strome, Alta. He has already secured a large patronage.

Form Partnership.

M. B. Dawson and R. C. Green have formed a partnership and will conduct a plumbing and heating business in Blairmore, Alta. A building is being moved from near the Mercantile store to Seventh Avenue, where it will be occupied by the new firm.

Will Build Stores.

Hamilton & Stott, the heating, plumbing and sheet metal firm, St. Thomas, have sold their present store to Dowler Bros. They will, at once, erect two modern stores on the vacant lot east of Anderson's Big Store. The east store will be occupied by them and will be a modern plumbing and heating establishment.

A Large Contract.

Hamilton & Stott, St. Thomas, have secured the following contracts:—Installing a vacuum steam system in the Catholic church, also contract for the sheet metal work on the same. This is the largest sheet metal contract ever let in the city, requiring over two tons of 16 oz. soft copper; Jas. Belbin, No. 9 Howard; Colin Walker, No. 9 Howard; Mr. Yoeman, No. 9 Howard; Mr. Post, No. 3 Howard; Scramdrett Bros., London, steaming plant; Helena Costume Co., London, eight inch steam main across Dundas St., in tile conduit; Boomer's Confectionery, London, steam heating plant; Western Trust Co., London, steam heating plant; Mr. McPhillip, London, steam heating plant.

By-Law Was Discussed.

Saskatoon, Sask., is in the throes of a discussion relative to the drafting of a new plumbing by-law. At the last meeting of the council the question was taken up and was threshed out at some length. About a dozen of the master plumbers were present, as well as the

city plumbing inspector and the medical health officer. The plumbers present were not at all backward in expressing their desires as to what should be inserted in the new proposed by-law. Nineteen of the 30 clauses were given their first reading. The chief question seems to be whether or not the work of plumbing inspection is to be left under the department of the medical health officer, and at the conclusion of a three-hour session it looked as though there would be no change of any account made at the present time.

Shop Over Comfort Station.

The Toronto Board of Control is considering the construction of public comfort stations. "Why, you can build a castle for \$10,000," protested Controller Ward, when the controllers discussed the City Engineer's estimate that \$30,000 would be needed to build three underground public lavatories, one at Roncesvalles and Queen, one at College and Spadina, and third at Parliament and Queen. "\$10,000 is an enormous price for a public lavatory," he went on. "Enormous," agreed Acting Mayor Spence. Then Controller Ward suggested that the city should buy a lot at these localities, build the lavatory in the basement, and erect a shop above it, which could be used as a barber shop, or shoe shine parlor, at a good rental, covering the interest on the cost. The ladies' section could be used as a manieuring parlor, hair dressing establishment, etc. The controllers thought the suggestion a good one. "It would get the lavatories in off the centre of the street," said Controller Ward.

To Heat 'Varsity.

City Engineer Rust, Toronto, recommends that permission be given to the University of Toronto to lay ducts in connection with their heating plant across Hoskin Avenue, Avenue Road, along the south side of Charles Street, and up the east side of Avenue Road to Bloor Street.

News Briefs.

L. H. Wright & Co. has started a plumbing business at Vancouver.

Kavanagh and Saunderson, plumbers, Montreal, are reported to have dissolved partnership.

R. J. Dunn is starting a plumbing business at Portage La Prairie.

S. N. McKinley, plumber and hardware dealer, Ninga, Man., has sold his business to A. F. Johnston.

H. Shotton, of Kamloops, B.C., has sold his plumbing business to Kamloops, Plumbing & Heating Co.

PLUMBING SUPPLY MEN ORGANIZING.

A meeting took place in Toronto on Thursday, of plumbing supply men who came together to discuss the advisability of organizing an association to cover the whole Dominion. Prominent supply men were from the principal distributing centres, as far east as Quebec, and as far west as Calgary.

The meeting was a somewhat informal one, the object being to test the opinion of the trade on the formation of an association to guard the interests of its members. Paul Blatchford, secretary of the National Supply Association of United States, was present, and explained fully the details of the association in that country.

An interesting discussion followed Mr. Blatchford's address, and it was unanimously resolved that it was desirable to form a Canadian Association along the same lines as that in U.S., providing that it could be done in such a way as to conform with the laws of Canada.

Seven of the gentlemen present were appointed a committee to thoroughly investigate the subject, and secure the best legal advice obtainable. The whole matter is thus left in their hands and it will probably be three or four weeks before they are ready to bring in a report.

While the work to be accomplished by the association has only been discussed in a tentative way, it may be said that the supply men have two objects primarily in view. One is to standardize manufactured articles, to a certain extent, so as to simplify the securing of repairs. Hitherto owing to the practice of many manufacturers in having diverse patterns it was sometimes difficult to secure repairs, except at the factory of the maker. The other is to supervise credits, and guard the members of the association against loss through bad debts.

DELEGATES IN ATTENDANCE.

Calgary.—E. L. Martin, J. Marr, P. J. Sheehy, J. R. Rogers, P. Kennedy, F. A. McVeigh, E. J. Young, R. J. Priestly.

Edmonton.—F. McKnight, J. Lockerbie.

Regina.—Harry Potts, Harry Read.

Saskatoon.—J. W. Robinson, Wm. Watts.

North Bay.—J. E. Farrell.

Winnipeg.—W. Banbury.

Montreal.—J. Watson, J. A. Gordon, W. Ryan, P. C. Ogilvie, J. Laurier, J. E. Walsh.

Toronto.—Geo. Cooper, Lewis Legrow, R. J. Shannon, Wm. Mansell, T. Maxwell.

Guelph.—Harry Mahoney.

Port Arthur.—A. C. Waltz, J. W. Barnes, J. Marshall, W. B. Sime, W. Evans, T. McArthur, A. D. Pickett, L. M. McArthur, C. D. Vincent, F. W. Barton, C. J. Deegan, E. Howe, M. McArthur, Geo. Tichbourne, R. A. Shaw, Geo. Fisher.

Fort William.—Ed. Higginbottom, D. A. Anderson, J. J. Culliton, J. C. McRae, D. McCallum, W. Miller, J. Silk, A. W. Allan, Wm. Dunbar, W. Brayley, A. Cunningham, L. A. Green, L. Millin, B. Arthur, J. L. Wells, W. J. Ross, Alex. Cameron, Allan Cameron, L. Milne.

Sault Ste. Marie.—E. H. Byrnes, J. A. Stone, P. J. McGuire, C. Beckingham.

MANUFACTURERS' REPRESENTATIVES.

The following is a list of the representatives of manufacturing firms and supply houses:

W. J. McWilliams, Weston Foundry and Metal Co.

A. M. Berryman, Metals, Ltd.

E. C. Dairs, Winnipeg.

C. W. Webb, Toronto, Warden King Co.

Geo. Willson, Montreal, Warden King Co.

W. C. Heinrichs, New York, Mueller Brass Manufacturing Co.

C. Wise, New York.

P. E. MacDonald, Toronto, MacDonald & Sons.

A. L. MacDonald, Toronto, MacDonald & Sons.

A. Derry, Gurney Foundry Co.

R. J. Cluff, Toronto Steel and Radiation.

P. McMichael, Toronto, Dominion Radiator Co.

W. Taylor, Guelph, Taylor-Forbes Co.

S. T. Adlard, Sault Ste. Marie, Cochran & Sons.

L. Robb, Empire Manufacturing Co., London.

FINE CATALOGUE OF PLUMBING SUPPLIES.

The new general catalogue issued by Twyfords, Limited, of Hanley, Stoke-on-Trent, Eng., manufacturers of sanitary appliances, is one of the most complete publications of its kind that could be looked for. In this age of advanced ideas, sanitation is not only receiving the attention that is its due, but the makers of sanitary wares are leaving nothing undone in this extensive field in which they are working. An examination of Twyfords' new general "J" catalogue conveys an idea of the progress that has been made and suggests the idea that but little remains to be accomplished.

In their announcement they say, "A wider recognition of the hygienic value of bathroom fixtures, and other sanitary appliances, has led to the recent introduction of so many improved designs as to make desirable the issue of this new General Catalogue . . . Although endeavoring to make it fully comprehensive as possible, the diversity and wide ramifications of our business have imposed certain restrictions, and we can only claim to have included the goods that are most representative of our manufacturers."

As it is, the catalogue comprises 500 pages and is composed of the following departments: baths, lavatories, water closets, urinals, sinks, videts, specialties and accessories. It would be impossible to refer to them all in these columns. Each article is numbered and illustrated. In addition to prices, a description of each is given so that one examining any portion of the catalogue is enabled to secure practically complete information. The illustrations are uniformly excellent, and in fact the book is a splendid example of the best in the publishers' and engravers' arts.

The pages devoted to specialties deal with fixtures for hospitals, asylums, prisons, laboratories, ships, railway carriages, stables, etc., and to the contractor should be a great help and guide. The part given over to accessories will also be of much interest to the trade and to many an examination of the catalogue would no doubt be instructive.

This catalogue is being sent to architects where it will be accessible to those interested. Owing to the heavy cost of production arising from the completeness of details, engraving, etc., it cannot be sent to the individual members of the trade much as the manufacturers would like to do this.

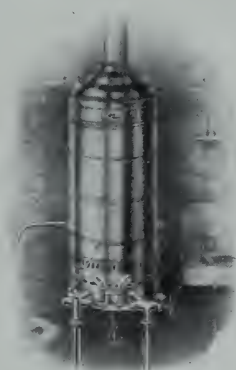
The earthenware used in Twyfords' sanitary appliances are known as white "CV" earthenware, "Adamant" fireclay ware and "Vitrina" fireclay ware. The latter has the special property of being absolutely non-absorbent through-

out both the clay body and enamelled surface. On this account it is used in the manufacture of fireclay W.C. basins, thus doing away with any danger which might arise as the result of these becoming unsanitary through imperfect enamelling.

Glassford Bros. & Co. are in charge of the company's showrooms, Montreal.

NEW MODEL BATH HEATER.

A new model bath heater has been placed on the market by the Rapid Heater Co., Grand Rapids, Mich. A gas regulating device has been placed on the gas valve, which enables the plumber to absolutely control the gas pressure at each individual heater, thereby insuring the most perfect combustion, no soot in water, no odor and no flashing back.



The heater has a ventilated top and improved water valves. It is claimed that the new model "F" heater will heat considerably more water per minute or hour, with the same or less gas consumed, than others on the market. It is especially adapted to high pressure gas, working equally well under natural or artificial.

The Rapid Heater Company have recently issued a new catalogue devoted exclusively to instantaneous bath heaters and will be glad to forward to anyone wishing same.

McKinley & Northwood, Ottawa, were awarded the plumbing contract for the Mutchmor street school, for \$3,881.

The 1912 convention of the International Steamfitters' Union, will be held in Toronto. This decision was reached at the convention which was in session at Cincinnati, last week.

The death occurred at Guelph of Charles Gringer, father of George E. B. Gringer, plumber of that city. Mr. Gringer lost his mother but six weeks ago and general sympathy will be extended to him in his double bereavement.



The Question Box



Subscribers are Urged to Send Questions to be Answered, or to Comment on Letters Published. Descriptions of Jobs Done or Shop Kinks are Also Invited.

OBJECTS TO HOLE IN COLD WATER TUBE IN BOILER.

Editor Plumber and Steamfitter,—In your issue of May 15th, page 14, you publish a drawing showing the advantage of having the cold water tube in a range boiler short

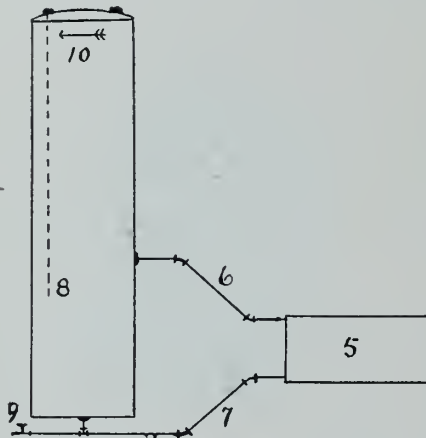


Figure 2.—Showing a Better Method of Connecting

enough to leave at least three or four inches of water in the water front in case that the apparatus ever should happen to siphon. Now, if in this drawing, instead of punching a hole at the point 10 (also shown by the arrow) any party were to make use of a vacuum valve on such an installation, I believe that they would find that the protection was more sure. This vacuum valve should be placed on the line at the highest point of the loop (or siphon) and, at the moment that a partial vacuum is created in the apparatus, the pressure of the atmosphere opens the valve and the action of the siphon is stopped. It seems to me that this is a much surer means of protection than the old way which has been in existence since the time that "Heck was a pup."

Yours truly, JOHN D.

REMEDY FOR THE BOX COIL.

Editor Plumber and Steamfitter,—In the issue of April 1st, page 11, a party asked how to erect a box coil on a radius and I notice that no one has yet given an answer. I will give one which I believe would meet the case. In the first

place the party need not use a coil at all. Let him make use of indirects and swing them beneath the floor at the most convenient place and he will secure a better ventilation to the room in question. Failing in this, through lack of room, he can get a certain pipe bending machine which will give him the curve that he desires and make up the coil to suit the circumstances.

PREVENTING WATER IN THE ASH PIT WHEN THE BOILER IS SUNK.

Editor Plumber and Steamfitter,—Will you be kind enough to tell me how water can be prevented from getting into the ash pit, when it is necessary to sink the boiler below the level of the cellar bottom?

H. H.

One way is to keep the water from getting in. To do this you will have to make the bottom and sides of the ash pit impervious and if the cellar is not treated the same way, a dam will have to be built around the ash pit. Another way is to make use of a regular cellar drainer which can be run by either steam or water power as is most convenient. This will take the water out

as fast as it runs in and keep the pit and the cellar in good condition.

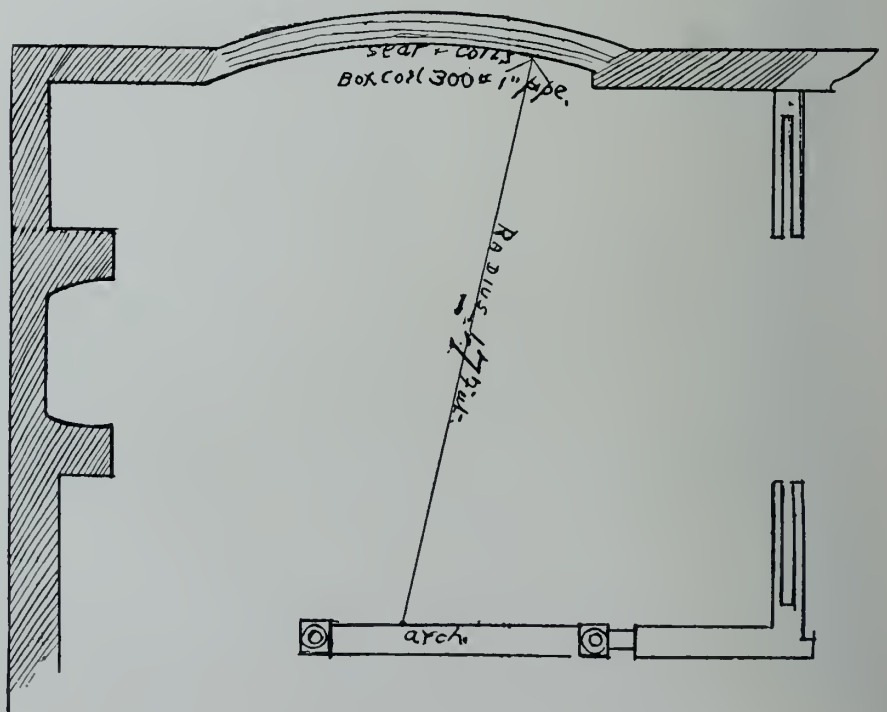
WHERE SHALL THE BATH ROOM BE PLACED?

Editor Plumber and Steamfitter,—Is there any reasonable reason why the bath-room should always be located on the second floor in the ordinary modern dwelling? I wish that you would run this in the next issue of the paper.

S. P.

It appears to us that the location of the bath-room in a house in which the amount of space is somewhat limited, as it is in the eight or nine room house, would depend upon the needs of the family. Now, in many cases, there is not room on the first floor to place the bath-room, unless it is made so small as to be not practical.

Where there is room, we believe that it is a good plan to have this room on the first floor, and a closet can be placed on the second floor if it is desired. As far as the safety, noise and general convenience is concerned, we believe that the bath room is better on the first, than on the second floor, if it can be so arranged.



Objectionable Legislation Blocked in England

Institute of Plumbers Succeed in Stopping Legislation Deemed to be Against Interests of Trade—Annual Meeting of the Institute Held.

London, Eng., May 15.—The annual meeting of the Institute of Plumbers was held on May 8, at Southport. President J. P. Cox presided and there was an attendance of about 100 members.

The president delivered his annual address, in the course of which he expressed gratification that the institute continued to make progress, and without a doubt they were beginning to be recognized as an important body. He asked for a little more self-denial on the part of the members in assisting the officers in their arduous duties so that they might become an even more powerful force than hitherto in the land. The past year had been an exceptionally busy one for the executive, who had broken new ground in several directions, which he believed would ultimately produce good fruit. The present generation of plumbers must not expect to reap the benefits of the whole of the work in which their leaders were now engaged. There could be no harvest unless seed was sown, and the members of the institute were in the position of sowers. One very important step which had been taken during the past year was the appointment of parliamentary agents to watch parliamentary bills for the purpose of preventing as far as possible clauses adversely affecting the plumbing trade from being embodied in laws or provisional orders. This movement would undoubtedly prove costly, and would entail a great deal of work upon the officers, but it was most necessary and important. During the last session alone it had been necessary to examine

no fewer than thirty-one such bills and provisional orders, two of which they decided to oppose because they would interfere with the business of the private trader. In consequence of the opposition both were withdrawn. The executive had been in communication with the organisations of the electrical engineers, municipal engineers, and ironmongers, and had obtained representation upon a joint committee to discuss matters of great importance to all. It was highly necessary, that they should work in concert with those trades which were suffering from the same evils as themselves. Attention had been given to the question of direct, or, as some termed it, single tendering. It was considered that by tendering direct to the architect or proprietor, plumbers would be more likely to obtain prompt payment for work done than under the present system, by which they were often kept out of their money for months and sometimes for years.

Report of Secretary.

Secretary J. H. Hirst in his report showed that during the year seventy-five new members had been added. Certificates of competence had been granted to twenty-seven operatives.

A resolution was passed suggesting to architects and public authorities the desirability of specifying that water connections should be fixed by competent plumbers, and also that such work should be given to workmen holding the certificates of the Institute of Plumbers.

of May to authorize the extension of the intake pipe for 2,000 feet beyond the new breakwater.

On May 10 three by-laws will be submitted to the voters of Renfrew for approval—\$3,000 for sewerage, \$25,000 for local improvements and \$3,200 for bridge construction.

Calgary, Alta., will erect a sewage disposal plant on a site recently purchased near there from Mr. Theinbolt.

The following by-laws will shortly be submitted at North Vancouver: Sanitary sewers, \$180,000; storm sewers, \$70,000; street grading, \$205,000; sewers, \$122,000; clearing, \$11,000; school \$46,000; water, \$25,000.

Public Buildings.

A \$15,000 town hall is to be built at Salto Coats, Sask.

A government building is to be erected at Uxbridge, Ont.

The Dominion Government has voted \$50,000 for improvements to Rideau Hall.

The public school at Barrie is to be enlarged and improved at a cost of \$40,000.

An industrial school is to be built at St. Eugene Mission, five miles from Cranbrook, B.C.

The Granite Club, Winnipeg, will probably erect a new building to cost about \$100,000.

The Toronto Jewish Young Men's Association will raise \$35,000 for the erection of a club building.

A large government building is to be erected at Brandon. It will be used as customs, land and post office building.

A public library branch is to be built in Toronto at Bloor Street and Dovercourt Road at a cost of \$75,000.

A by-law to raise \$75,000 for an extension to the hospital will be submitted to the ratepayers of Moose Jaw.

The congregation of St. Anne's, Toronto, are considering the erection of a parish house at a cost of about \$40,000.

Calgary is considering the erection of a civic storehouse at a cost of about \$50,000. Plans have been prepared and submitted.

The ratepayers of Strathcona, Alta., will vote on May 10 on a by-law to authorize the borrowing of \$50,000 for a hospital.

A new hockey arena is to be erected on the site of the Mutual Street rink, Toronto. The plans call for a structure to cost \$300,000.

At a special meeting of the Toronto Northern Congregational Church, a building committee consisting of J. H. Nasmith, A. W. Thomas and F. J. Smith was appointed to report on the erection of a new church building on the property at the southeast corner of Bloor and Jarvis Streets.

New Buildings, Water and Sewerage Systems

Opportunities Offered by Municipalities and Private Enterprise for New Plumbing, Heating, Ventilating or Sanitary Systems—Work Being Undertaken in Every Section of the Dominion.

Municipal Undertakings.

A waterworks system will be installed at Olds, Alta., shortly.

Scotstown, Que., will instal waterworks and a sewerage system.

The ratepayers of Camrose, Alta., adopted the by-law to spend \$83,000 on waterworks and sewers.

The Ingersoll, Ont., board of health have recommended the council to institute a sewerage system for the town.

It has been decided to take active steps to instal a water and sewerage system at Kamsack, Sask.

The ratepayers of Melville, Sask., carried by-laws to raise \$5,000 for a storm

water sewer and \$63,000 for waterworks system.

The municipality has under consideration the installation of a waterworks system at an estimated total cost of \$21,500.

The sewer by-law to raise the sum of \$100,000 for a sewerage system will be again submitted to the ratepayers of Cranbrook, B.C., on May 22nd.

The ratepayers of Ridgetown, Ont., adopted the by-law to spend \$35,000 on a waterworks system. The water will be secured from artesian wells.

A by-law will be submitted to the ratepayers of Port Arthur on the 29th

PLUMBING AND HEATING MARKETS

MONTREAL.

Montreal, June 14.—A local dealer who has quite an extensive business in plumbers' supplies, states that his business so far this year shows an increase of 25 per cent. over what the books showed for the same period last year. There is a great deal of building work in progress practically on all sides of the city and the surrounding country, creating what is designated a very satisfactory demand. On all sides there is an air of activity and it is believed that the summer will live up to the promises made in early spring.

Iron Pipe and Fittings.—There is a good demand for the various lines of iron pipe. Manufacturers are busy and jobbing houses show encouraging returns. Prices have remained steady; black iron pipe per 100 ft. on 1 in. basis is \$1.70, and galvanized \$6.35. Discounts on fittings are: Malleable fittings 40; cast iron, 65; standard bushings, 70; headers, 60; flanged unions, 65; malleable bushings, 65; nipples, 75 and 10; malleable lipped unions, 65 p.c.

Soil Pipe.—Enquiry for soil pipe is active. It is possibly not the briskest department, but there is a good business passing. Quotations are unchanged. For medium and heavy pipe up to 6 in., 70 and 10; 7 and 8 in. pipe is 50; light pipe 60 and 10; fittings, 70 and 10 p.c.

Solder.—The demand for solder continues steady and amounts to quite a figure. The work now in progress is calling for a large supply of solder. King solder, 26c.; strictly solder, 25c.; commercial, 24c.; and wiping, 22c.

Lead Pipe.—There is a specially good enquiry for lead pipe, its percentage of the entire pipe trade being quite appreciable. Discounts are 30 p.c. on lead pipe and waste; 50 p.c. on traps and bends; caulking lead is quoted at 4½c. a lb.

Boilers and Radiators.—The amount of heating work being carried on is in keeping with the other activities and a good many orders have been received and filled or are to be filled. Considering the whole plumbing and allied trades the opinion has been expressed that they are settling into a good season.

Enamelware.—This is one of the busy departments. One retail plumbing supply house stated that they had increased their show rooms and were going after business harder and for that reason they were getting more business than usual. The general condition is, however, practically in the same strain.

TORONTO.

Toronto, June 14.—Business in plumbing and heating goods is very brisk, at present, especially in the lines which are used in residence work. The majority of large buildings under construction at the principal centres have not yet reached the stage where plumbing and heating installations can commence, so that, although specifications for these contracts are nearly all placed, the goods are not yet actually moving.

In residence work on the other hand, business is in full swing, and a very encouraging feature of the trade, this season, is the demand for the better grades of material. This has been very pronounced, all the supply houses stating that their trade in the more expensive lines has been much ahead of previous seasons.

Solder has again advanced, owing to the unprecedentedly high price of tin. Local stocks are light, and it is thought that prices will go still higher. Jobbers and manufacturers of solder do not show any great desire to sell even at the high price now ruling.

Enamelware.—Good orders are being filled daily for high grade goods to be used in residence work. Installations in large office and public buildings have not yet commenced, but from now on this class of business should be very brisk. There is no change in enamelware prices.

Boilers and Radiators.—The movement toward steam and hot water heating is just as pronounced this year as in the past few seasons, and a record year is looked for. More settled weather conditions are favoring trade in boilers and radiators at present.

Soil Pipe.—With splendid orders constantly coming to hand, price conditions are still very unsatisfactory. There is considerable cutting and discounts are quoted all the way from 70 and 10 to 70, 10 and 10, on medium and heavy. On the 7 and 8-inch sizes, the discount is 50 per cent.

Lead Pipe.—A good demand continues, and prices are steady at the same prices as were quoted in our last report. Lead waste is quoted at 9c per lb., with a 30 per cent. discount. Caulking lead is quoted at 4½c per lb.; traps and bends show a discount of 50 per cent.

Iron Pipe and Fittings.—A good healthy business is reported, and no price changes have been made since our last issue. Current quotations are:—Cast iron fittings are selling at a discount of from 65 to 70 per cent. Malleable fittings stand at 37½ to 40 per cent. Cast iron bushings are 70 and malleable run

all the way from 65 to 70. Nipples remain firm at 75 and 10, but 67½ and 70 is allowed by some firms on headers, while others still quote 60 and 10. Flanged unions stand at 70; malleable-lipped unions, 65 to 67½c; galvanized pipe, 1-inch, \$6.19; black pipe, 1-inch, size, \$4.54.

Solder.—Tin has reached such a high figure, that solder has gone up since our last report. The situation is such, just now, that manufacturers of solder will not quote at all, except for immediate acceptance, fearing that another sudden rise in tin, would wipe out all their profit. Toronto supply houses are quoting wiping solder at 24 cents, and half-and-half at 26½ cents.

Metals.—Tin is still supplying the spectacular features of the market. The June supply was cornered by an English syndicate some time ago, and they have forced the price beyond any previous record. To-day the jobbers here are selling tin in small quantities, as high as 56 cents per pound. It is said that the same English syndicate practically control the supply for the next three months, so that there is little prospect of cheap tin.

Copper is beginning to show some strength and a peculiar feature of the situation is that the price for future delivery is higher than spot. This is because it is felt that the big copper interests of the United States will now be able to consolidate, and prevent any further glutting of the market with copper.

CHANGE IN STREET NUMBER.

Many visitors to Toronto intending to call upon Plumber and Steamfitter, take the most convenient method of getting our exact address—the Telephone Directory. Through an oversight on the part of the Telephone Co., the latest directory gives the wrong number—111 University Street. The street was recently renumbered, and the entrance to our office is now 143 University Ave. just the centre of the next block north of the number given in the Telephone Directory.

APPOINTED QUEBEC REPRESENTATIVES.

Arrangements have just been completed between the Wallaceburg Brass & Iron Mfg. Co., of Wallaceburg, Ont., and Jos. R. Martin & Co., Board of Trade Building, Montreal, whereby the latter concern have accepted the agency of and will represent the former company, in the Province of Quebec.

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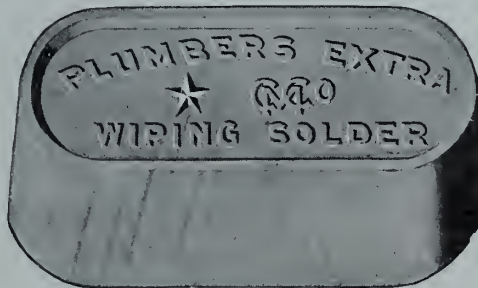
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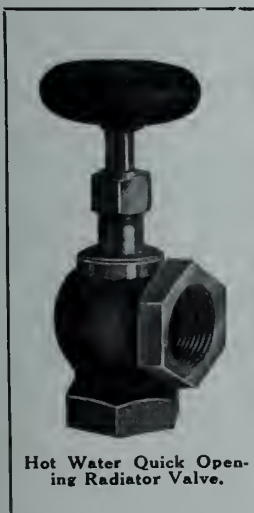


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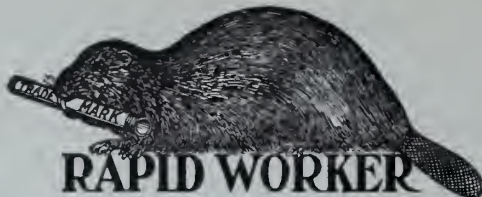
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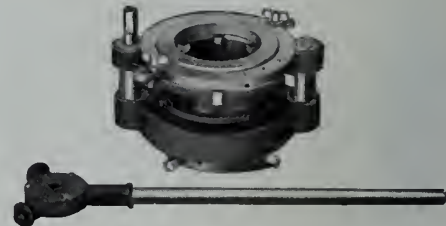
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“Scotia” Plumbing Supplies

we carry an enormous and splendidly assorted stock of the most reliable goods made in the world. We can generally ship immediately, on receipt of order, anything from a washer to a complete bathroom outfit.

*Test us. Our prices are as low
as reliable quality permits.*

Wm. Stairs, Son & Morrow, Ltd.

HALIFAX

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NOVA SCOTIA

Established A.D. 1810

Brings Prestige and Satisfaction



The “SOVEREIGN” RADIATOR

Opportunity has been knocking at your door time and time again--the rarest opportunity in the plumbing business.

Until you avail yourself you will never completely realize the true value of the SOVEREIGN RADIATOR.

Our Radiators are very artistic and are made of the best grade material. They always bring the finest results, because every valve, every casting and every joint are absolutely efficient and reliable.

Gain your customers' confidence by installing the best--the unconditionally guaranteed.

WRITE FOR CATALOG AND PARTICULARS

Taylor-Forbes Co., Limited, Guelph, Ont.

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*Sovereign
Monarch*



The B.O.T. Syphon Closets

Old style Syphon Wash-down showing contraction and restriction.



Note the Shelf, 9 in. long. Observe the narrow point. The transverse plane and the contraction.

Old Style Syphon Jet showing contraction and restriction.



Note Shelf, 3-5 in. long. Observe the contracted winding outlet and a transverse plane causing stoppage and clogging.



The B. O. T. Patented Lever is a mechanical masterpiece, powerful, positive in action and absolutely fool-proof.

B. O. T. Pat. Syphon Closet showing expansion and straight outlet.



GOOD

BETTER

BEST

The B.O.T. Bowls rough in at 12 in. with Elbow slip joint connection to make allowance for variations from exact measurement. Remember we are closely imitated but far from being equalled.

Tanks are made of Vitreous China and woods from solid mahogany to straight cut oak.

Seats are made Full Saddle, $\frac{1}{2}$ Saddle and Round.

FITTINGS—Substantial and heavy pattern. B.O.T. Compound Lever, Elevated Ballcock, well machined and practically noiseless, Copper Linings with our own Lock Seam, and Tinned Bottoms, full 10oz. or heavier if specified.

ALL ENQUIRIES CHEERFULLY ANSWERED
Write for Detail's

The B.O.T. Mfg. Co., Ltd.,
35 Mutual St., Toronto, Ontario.



PLUMBER & STEAMFITTER

and Sanitary Engineer of Canada

THE MACLEAN PUBLISHING COMPANY, LIMITED, PUBLISHERS

MONTREAL, 701-702 Eastern Townships Bank Bldg.
LONDON, ENG., 88 Fleet St. E.C.

TORONTO, 143-149 University Ave.

WINNIPEG, 34 Royal Bank Building
NEW YORK, 115 Broadway

Vol. V.

Publication Office : TORONTO, JULY 1, 1911.

No. 13

THE
STANDARD
COMPANY LIMITED
GENERAL OFFICES AND FACTORIES · PORT HOPE · CANADA

Of Importance to the Plumber:

We now have ready a set of booklets, pocket size, showing our fixtures and their **ROUGHING-IN MEASUREMENTS**.

Booklet A—Bath Tubs, etc.

- “ B—Lavatories and Drinking Fountains
- “ C—Sectional Lavatories and Wash Sinks
- “ D—Laundry Tubs and Sinks
- “ E—Range Closets and Urinals

If you have not received these we will send them to you free of charge on request.

Standard Ideal Company, Limited

BRANCH OFFICES AND SHOWROOMS

TORONTO 119 KING STREET EAST	MONTREAL 44 BEAVER HALL HILL	WINNIPEG 76 82 LOMBARD ST
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Beaver Brand

Cast Iron Enamel Ware

Noted for Good Color, Durability and Attractiveness



The above cut shows our Wall Lavatory—artistic, sanitary and durable.

One of our leading sellers. Our splendidly equipped plant is producing an unbeatable range of enameled Bath Tubs, Slop Sinks, Kitchen Sinks, Laundry Tubs, Lavatories, Closets, etc., and our customers can be sure of satisfactory goods promptly shipped. A guarantee goes with all Beaver Brand Enameled Ware.

Amherst Foundry Co., Ltd., Amherst, N.S.

ONTARIO SALES AGENT :

MONARCH BRASS MFG. CO., LTD., ¹⁷⁸⁻¹⁸⁰ Victoria Street, TORONTO

MARITIME PROVINCES
All Jobbing Houses

MONTREAL, P.Q.
All Jobbing Houses

WINNIPEG, MAN.
E. B. Plewes, 120 Lombard St.

VANCOUVER, B.C.
A. O. Campbell

PLUMBER AND STEAMFITTER



Our New Catalogue is just off the Press. How many do you require?

FITTINGS LIMITED

OSHAWA

::

WINNIPEG

::

MONTREAL

Does Advertising Pay?

ABOUT a year ago a firm ran a double-page advertisement for compressed air water service systems in Plumber and Steamfitter. We do not know what results they secured at the time, but a few days ago one of our subscribers in Yarmouth, N.S., recalled the advertisement but had forgotten the name of the advertiser and asked us if we could give them the address.

Had this been a circular instead of an advertisement the enquirer would have been at a loss how to trace up the name and address of the manufacturer.

This is not an isolated instance. We will furnish on request a dozen similar examples which have come to our attention during the past few months.

Any manufacturer or jobber who is anxious to familiarize the Canadian plumbers and steamfitters with the merits of their goods or with the service they are able to offer will find the advertising columns of Plumber and Steamfitter the most economical method they can use.

The results may not be seen immediately but if you tell your story in an interesting and convincing manner the trade will remember you when you are in the market for the line of goods you have to sell.

Write us for full information as to advertising rates and the thoroughness with which we cover the Canadian field.

Plumber and Steamfitter

and Sanitary Engineer of Canada

MONTREAL

TORONTO

WINNIPEG

I'M NYE THE DIE MAN



Did you ever see a brindle pup barking at a tree'd cat?

That's about the same kind of a noise a NYE DIE makes in the shop of a steamfitter. Did you ever see that same brindle pup hang on to a root and growl? Did you ever try to pry him loose?

A NYE DIE works just like that. Once you let it get you tree'd you're a NYE DIE man forever!

LISTEN

If all the other die makers in the country had a "tail hold" on that die they couldn't pull it away from you even if they pulled down hill. The reason is:

YOU KNOW A GOOD THING WHEN YOU SEE IT

The only difficulty comes in making you SEE it. That's why I say: Order a NYE DIE for ten days and if, after the test, you find the NYE DIE is the best die you ever had in your shop, if it saves time, narrows your vocabulary and proves that the BEST STEEL made into the BEST DIE cuts the BEST, then it's your turn to be square and send in the price of the Die.

SAY—Could I afford to pay the price I am paying to this Paper for this space, and then lie to you about my Die, and keep it up? Could I start with nothing but a lot of enthusiasm and build up the biggest exclusive die plant in the United States on a lie?

YOU KNOW I COULDN'T

If I didn't have the best Die, I couldn't make you the offer I do, because you would return the Die and in a few months there wouldn't be enough left of my business to build a dog house! If the NYE DIE wasn't the STUFF, somebody would call my bluff, wouldn't they? You bet they would, and you know it! But the NYE DIE is all right. It's got 'em all on the run, boys. "Keep your eye on the NYE DIE" and watch the brindle pup keep the nice kitty up a tree.

How about that trial order from you, Bill?
"NYE," the Die Man.



The Nye Tool and Machine Works, 124 North Jefferson St., CHICAGO

As for quality—The steel alone used in the Nye Dies costs more than any other similar Die on the market sells for complete. Think it over.



History:

For the whole world we established the high standard of Chain Tool strength and do unfailingly sustain our claim for superiority.

Your pull, our pull and "Vulcan-Bijaw's" live on same basis—if not superior it couldn't hold.

In the matter of service we've doubled up on "Vulcan-Bijaw" pull!

The double-ended reversible jaws, easily turned when teeth

first in use become dull, assure the service of two tools at the price of one.

There's a full measure of economy in "Vulcan-Bijaws."

All sizes; each size equal to four pairs common tongs. See your dealer.

A POSTAL BRINGS LITERATURE

J. H. WILLIAMS & CO.

Superior Drop-Forged
Chain Pipe Tools

77 Richards St., BROOKLYN, N.Y.

WROUGHT PIPE

BLACK and GALVANIZED. SIZES, 1/8 IN. TO 4 IN.

All our pipe thoroughly inspected, tested to 600 lbs. hydraulic pressure and branded.

Ask your jobber for



Brand

CANADIAN TUBE & IRON CO., LIMITED

Montreal

Works: Lachine Canal

Fig. I

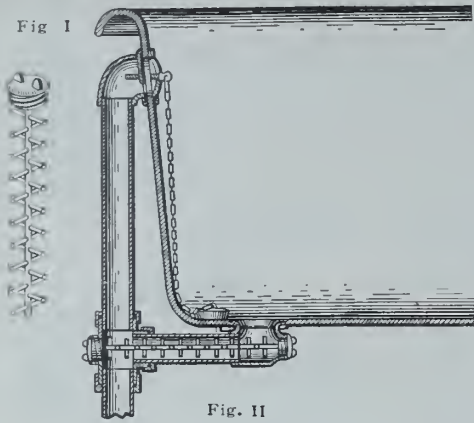


Fig. II

E.N.O. Patent Bath and Waste Overflow

SOMETHING NEW

Here is a Bath Waste and Overflow that can be thoroughly cleaned out from two outlets, viz: back of Bath or underneath. The Cleanout Rod, Fig. I, is made of aluminum, has a ball joint connection to the plug. All the fittings are of cast brass and heavily nickel plated. The whole is got up for use and will stand more abuse than any other Bath Waste in existence. Our patent can be used with any standard bath on the market.

SOLE CANADIAN MANUFACTURERS

Westport Mfg. & Plating Co., Limited
117½ BANK STREET, OTTAWA



JUST WHAT YOU'VE BEEN LOOKING FOR

Rapid
BATH HEATER

NEW MODEL "F."

This new "Rapid" Model "F" has a gas regulating device on gas valve so that gas pressure at each individual heater can be absolutely controlled. This is a new feature and guarantees perfect results. Put this new "Rapid" Model up by the side of any instantaneous bath heater on the market and watch results under any conditions.

SEND AT ONCE FOR COMPLETE CATALOG AND PRICES.

RAPID HEATER COMPANY
(INCORPORATED)
GRAND RAPIDS, MICH., U.S.A.

The Honeywell System OF HOT WATER HEATING

WAS ADOPTED IN THE YEAR 1910 IN

FORTY PER CENT.

OF TOTAL

Hot Water Installations Throughout Canada

Upon no other point are Architects, Steamfitters and Proprietors so well agreed as on the Merits of the Honeywell System.

The Honeywell Heating Specialty Company

Frank T. Rawley,
Manager for Canada

Room 1008 Eastern Townships Bank Bldg., Montreal.
Phone Main 4615

The
Heart

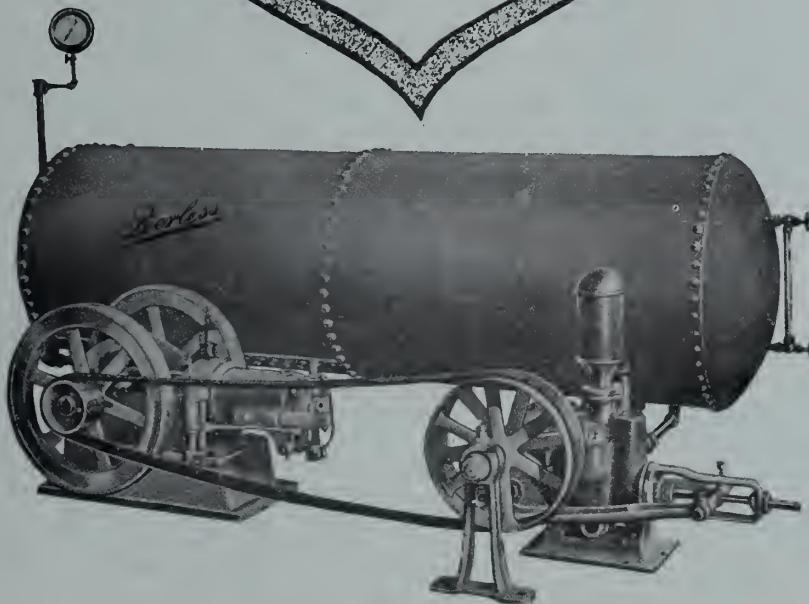
Of
Service

Peerless

WATER SERVICE
SYSTEMS

Our Catalog contains valuable information, a card will bring it to you by return mail.

The demand for "Pressure" systems is rapidly growing. The "Peerless" meets it in every particular.



Architects all over Canada are specifying "PEERLESS" WATER SERVICE SYSTEMS, because through experience they have come to regard them as the most simple and reliable on the market.

When you buy from us, you buy from CANADIAN MANUFACTURERS whose reputation for looking after the interests of their customers is as wide as the continent.

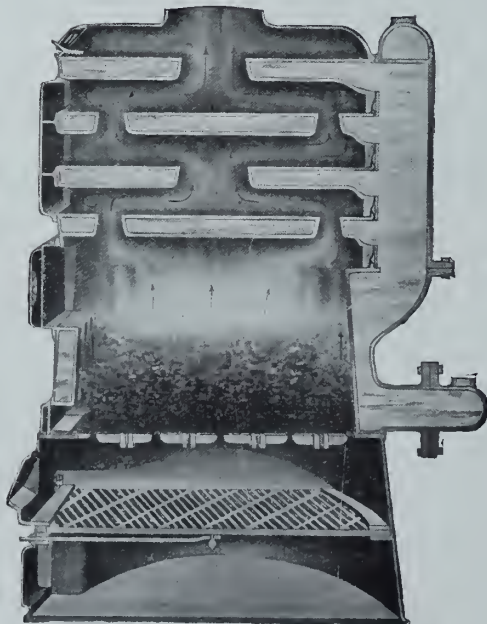
Study our Catalogue; if you are not clear on any point, ASK US.
TANKS FOR HOT WATER, ETC.

National Equipment Company, Ltd.

21-27 LOMBARD STREET, TORONTO, ONTARIO



No. 3, High Base "King"



Cross Section No. 5, High Base "King"

You don't have to draw on your Imagination

to sell a man a K I N G Boiler.

From ash-pit to smoke-pipe it's improved, up-to-the-minute and just a lap or two, on every point, ahead of any competitor.

Show your prospect the *patented "trouble-proof" grate* of the new K I N G, connected without split-pins or bolts.

Let him try the *side-lever shaker* and demonstrate to himself how much easier and simpler it is than the old-fashioned, back-breaking "crank."

Tell him about the *"double-in-size" mouths* on the *water-post* and their importance in quickening circulation.

Explain to him the arrangement of the *heating surfaces* and how they transmit the most intense heat from the fire to the cooled water from the radiators.

These and the other manifold features of the K I N G are ones that get under a man's skin. In presenting them to an architect or owner you have a chance to convince him that you know a thing or two about hot-water heating. A half-hour's talk on straight, common-sense advantages like these will influence your prospect more than all the "oldest firm" and "longest record" pleas the other fellow can think up in a week.

"K I N G" Radiators used in conjunction with "K I N G" Boilers assure a *Perfect Hot Water Heating System*.

Our latest heating booklet, "Comfortable Homes," describes every part of the K I N G—The pictures tell the story. Let us send you a copy.

Steel & Radiation, Limited TORONTO

Head Office : : : : Fraser Ave.
Showrooms : : : : 80 Adelaide E.

MONTREAL

Branch Office : : : : 138 Craig St. W.

Agencies in all principal cities.

Plumber and Steamfitter

and Sanitary Engineer of Canada

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J. G. LORRIMAN }

Circulating amongst Plumbers,
Steam, Hot Water and Gas Fit-
ters, Sanitary Inspectors, Heating and
Ventilating Engineers, City Engineers,
Boards of Health, Architects, etc.

TORONTO, JULY 1, 1911

AS time passes and it is possible to review the business done at the national convention in a retrospective light, the impression deepens that the policies laid down and the work undertaken will have a splendid "uplift" effect on the trade. If energetic steps are taken to follow up the work done, the future will see rapid and sweeping results. The improved organization resulting from the appointment of a permanent secretary and the revival of provincial associations will inevitably result in the purging of many evils. The change in name will some day place the trade in public estimation on the high level where it rightfully belongs.

It cannot be too strongly urged that the future of the trade depends very largely on the manner in which the convention is followed up. If the reforms instituted are energetically shoved to the front and the work started is carried on without any intervening period of inactivity, splendid results will follow. But, if matters are allowed to lapse now, it will be found doubly hard to start when it is finally decided to again take up the work.

Every member of the trade should do his best to assist the officers in carrying out the ambitious and arduous programme that they have before them. The officers will need every help and encouragement. The individual can lend assistance by writing suggestions, by answering letters promptly and by striving to influence fellow members to take an interest in the work.

WHILE the thinking men of the trade are becoming fully alive to their value in the community, and to the great importance of their calling, there are still serious dangers threatening the prosperity of sanitary engineers, and these dangers arise mostly from within the trade itself.

Dangers From Within

Probably the chief cause for alarm, is the number of inefficient workmen devoid of business experience, who set themselves up as masters, and compete for plumbing and heating jobs, on the basis of price alone. Their only object is to secure a good wage for their own work, and, as many of them have no shop and keep no stock on hand, they do not require to figure on overhead expenses. In many cases they are willing to figure supplies at net wholesale, without making any profit upon them, whatever.

These circumstances are likely to make their tenders appear exceedingly low, when compared with those of re-

putable sanitary and heating engineers who are building for the future, and who, consequently must needs estimate on a reasonable profit. Moreover, these novices, being but indifferent business men, are very likely to forget some important item of cost, when making up their estimate with the result that, if awarded the contract, they must face the prospect of losing time and money on the job, where they had thought that they would be receiving a fair recompense for their labor.

The worst feature of this system, so far, at least, as the public is concerned, is that there is absolutely no way of learning, except through bitter experience, whether these low-priced semi-masters are really competent to lay out a job and carry it to completion. Cheapness has such a lure for some people that they will take chances on the lowest tender, under any circumstances, but, in the interests of public health, some measures should be taken to prevent any but competent "sanitary and heating engineers" from supervising installations upon which both comfort and health depend. The incorporation of the National Association, when it is accomplished, may prove to be the first step in this direction.

KEEP up the local associations. The national association has its work to do, the provincial is equally important, but it is doubtful if either of the general organizations will ever be able to accomplish lasting work if

Keep up Local Associations

the interest is not kept up in local work. It is right in the town association, where the best and most telling work is done. The national and the provincials meet once a year. Men from all parts of the country mingle ideas and views, legislation is enacted affecting the trade as a whole. But it is in the locals, where direct competitors meet, that the most can be done to improve trade conditions and to remove the friction and ill feeling, which so often exists, and which quite as often leads to open warfare.

The suspicion with which competitors so often regard one another, is about the worst menace that the trade faces. It invariably leads to disastrous price cutting, and to open criticism of one another. This, naturally, reflects not only on those engaged in the strife but on all members of the trade as well. It is not uncommon to find that the plumbers in some one town are hardly on speaking terms. Each member of the trade in that particular place thinks that the other members are rogues and sometimes they do not scruple to air their opinions. The pub-

lic comes in time to accept the estimate that these men place upon themselves.

The local association removes all ill-feeling. Men meet their competitors on a common, friendly footing and discover that, after all, they are human, likable men. They cease to bicker and probably learn in time to have a sincere regard for one another. They do not strive any the less aggressively to get the best of the business that is going, but they eliminate the unfair tactics which previously had been resorted to, and they work without mutual animosity.

Furthermore, the local association enables the trade to offer resistance to unfair encroachments. Divided they fail, when tactics are practiced in other quarters which discriminates against the trade. United, they can fight back and demand redress.

Neither the provincial nor the national can deal with local conditions as effectively as the local association. It is, therefore, highly necessary that attention should be paid to this phase of organization. Quite a few cities are sadly in need of attention.

THE authorities in Ottawa have decided upon a complete sanitary inspection of the city, at an estimated cost of \$2,000. They intend to have a thorough house-to-house canvass and a series of questions will be put to every householder. If necessary each house will be inspected and the sanitary arrangements reported upon.

Vigorous Step Is Planned

When the inspection is completed, the authorities will be in a position to vigorously proceed with the enforced improvement of sanitary conditions. Ottawa has learned by bitter experience that it does not pay to permit carelessness in this respect. Serious epidemics of disease in that city have been directly traceable to the deplorable conditions in the poorer sections.

Other cities might follow Ottawa's example with profit. Even in places where the health regulations are strictly carried out, there are numberless homes—the use of that sacred word is hardly permissible in this connection—where there is absolutely no provision for the safeguarding of health and life.

MORTALITY tables recently compiled from statistical return of the states of New York and Maine, show a truly remarkable state of affairs with reference to the relative mortality averages for country and city. Not so

Value of Sanitation

many years ago, the average of deaths in the city was largely in excess of that in the rural districts, due very largely to the unhealthy conditions of living in the crowded cities. Now the order is reversed. Mortality is greater in the rural sections to-day than in the cities and the only explanation seems to be that the sanitary conditions of town life have improved during the last decade while life on the farm has not changed to any appreciable degree. Other reasons are advanced but they have nothing to substantiate them.

This reversal of the old order throws into prominence the importance which must now be attached to sanitary conditions. Commenting on the matter, a contemporary says:

"The second lesson is that improvement in sanitary conditions in the rural districts is the next thing that demands attention. There can be no doubt that the crudity of sanitary conveniences of various sorts in the country is responsible for many of the cases of

illness which are developed. The obligation of the state to compel sanitary conditions among its populace is greater than its obligation to compel moral conditions, though it has an obligation to do both. The overlooking of one cannot be excused by activity on behalf of the other."

It is high time that the health authorities took up the question of sanitary conditions in the rural sections. Township boards of health exist, but they do not seem to be awake to the danger of the situation. The improvement in manufacturing methods of late years has reduced the price of sanitary appliances and to-day a complete system is not beyond the reach of any farmer. In the large cities, the authorities are insisting on the installation of sanitary appliances in every home. Is it not time that something was done with reference to the rural sections?

THE delegates from Calgary reported that they had the greatest year in history in sight. The prospects are for a greater building year than ever before in the Prairie City, and in consequence the plumbers are already so

A Record Year Ahead

actively engaged that it was a difficult matter for the delegates to get away for the convention. The fact that they made the time to get away speaks eloquently of their loyalty to, and their belief in, the association.

Calgary is not the only city blessed with abounding prosperity. Delegates from east and west alike reported active conditions, and it is reasonably certain that 1911 will prove a record year in all sections of this broad Dominion. It is, however, equally certain that a great many men will fail utterly to reap any benefit from the favorable state of trade. The price-cutter is still so common a type that the trade as a whole will not benefit as fully as it should.

AN important matter was touched upon at the convention when the necessity for a standardization of plumbing ordinances was urged. There is at the present time a vast divergences in the regulations existing in

Standardization Of Ordinances

different cities and provinces. What is forbidden in some places, is allowed in others. Even the interpretations of ordinances differ widely and it is indeed a difficult matter sometimes to know just how to proceed. Much confusion is the natural result. When a man, who has worked in one city and become accustomed to the regulations there, starts to work somewhere else, the chances are that he will be all at sea. Although perhaps a thoroughly competent man, he may infringe some local rule and find his work condemned. Confusion of prices also results. Jobs differ in value just as widely as the ordinances, and to the public this divergence is suspicious. If a man in A. finds that he has been charged more for certain work than is obtained in B., he does not pause to reflect that the law in A. demands that the sanitary engineers do more work and provide more expensive material than is necessary in B. but jumps to the conclusion that he has been robbed.

The problem is an intricate one. It has been suggested that a government commission be appointed to investigate and frame up ordinances to cover the whole Dominion. Until such time as some concerted action is taken, it will be found impossible to remedy conditions.



A photo was taken for the city of Port Arthur of the party which sailed on Mr. Connée's private yacht "Sigma" on Thursday afternoon of convention week. Reproduced by kindness of city industrial commissioner Neill.

The Aftermath of the National Convention

New Officers are Getting Down to Work—General Approval Expressed of the Steps Taken by the New Society—Some Anecdotes and Short Notes of the Doings of the Delegates

MATURE consideration of the business done at the National Convention, confirms the phrase applied at the close of the proceedings—"The best convention ever held." The steps taken by the delegates to raise the trade to a higher plane have helped to arouse interest and enthusiasm on every hand. It is quite apparent now that the first step has been taken toward the general improvement of trade conditions.

"I think it is up to every individual member now," said one man, the other day, "to follow up the lead of the National. Personally, I intend to change my letter heads to 'Sanitary and heating engineer' and it would be wise if every man in the business did the same. It will take some years to bring the new name into general acceptance, but if we don't start right away, it will never come. Your paper should urge that each man make the plunge right away before his enthusiasm has a chance to cool."

"We will have a provincial association out here before the Calgary Convention," writes a western delegate. "Get the other provinces working along the same line."

Comment of a very diversified nature is heard on all sides but the general trend is toward hearty approval of the progressive measures enacted by the new society of Sanitary and Heating Engineers. It is safe to assert that the officers will not let any grass grow under their feet in following up the work and in looking after the heavy volume of business entrusted to them.

CONVENTION ISSUE PRAISED

Plumber and Steamfitter has heard many words of praise for the convention number, issued two weeks ago, which contained a full report of the proceedings at Port Arthur and Fort William. Copies of the paper greeted many of the delegates on their arrival home. Despite the fact that it takes two days to transmit mail matter from the Twin Cities to Toronto, the issue was fully illustrated with photographs taken during the course of the convention. "Your report was so complete," writes one man "that those of us who were unable to go have been able to read everything that was done. Your paper is a great help."

Mr. Frankland's Letter.

Owing to the fact that a copy was not available in time, Plumber and Steamfitter did not give, in the last issue, the letter of Secretary Frankland of the Ontario Society, which was read at one of the closing sessions. It is herewith presented.

"Mr. Chairman and Brother Delegates: I am afraid I will be called a knocker or maybe worse by the time I have finished. It is of the organization that I desire to say one or two words.

1st. We have the local Association which will always be the backbone of any organization or Society.

2nd. We have the Provincial Body, on account of the laying out of this Dominion of ours.

3rd. The National or Dominion Association of Master Plumbers.

As I have said, first comes the local, which in all cases is the starting point. On account of the dividing of this Dominion into Provinces, it would seem very necessary to me that we should have a Provincial Association for each to which all locals of that Province should belong. There should be a permanent Secretary who would bring before the different locals all matter of interest pertaining to the craft.

Each local should pay to that Provincial Association a per capita tax per member of sufficient size to keep that Secretary in office, and also to cover all other necessary debts.

As for instance, we have formed a Provincial Association in Ontario called the O. S. of S. & H. Engineers, with officers elected from the delegates from the different locals.

The per capita tax is \$5 per member up to 10 members and \$1 per each additional member from each local.

Now what I wish to show is this, that in place of calling the National Association together each year, and having delegates present from all cities and towns in the Dominion at great expense to themselves and also to their local association, we should only call a Dominion Convention once in about two years, and with delegates from the Provincial bodies only, elected by the local delegates to the Provincial Convention.



A Group of the "Live Wire" Supply Men and Manufacturers' Representatives at the Convention, Together With Our Artist's Impressions of the Life of the Traveling Salesman.

which would be held once or twice each year as would be necessary.

I am not running away with the idea that the N.A.M.P. is of no use. That is farthest away from my mind, but I claim that from the economical side my idea is best, also from the side of doing most good. I claim that the Provincial bodies will do more to bring about improvements of a lasting nature than the National Association. And with delegates meeting from each Province they will gain more knowledge from each other than now, with delegates from all over, and having no fixed plan before them.

Then, once again comes the question of per capita tax payable to our parent Associations. If our local Association were organized subject to the Provincial body, and, then to the Dominion body, I claim that \$1.00 a year per master plumber all over Canada would be ample to run the affairs of our National body, receiving it from the Provincial body on their full membership of all the locals. For there is necessary work which the National or Dominion body should do and which can be done only by them. But local organizations will receive more and efficient benefit from a Provincial head which should have a charter, to govern each province. There is no question about the need of an organizer to cover all the ground necessary to an organization of this kind. Take in Ontario where I hold the position of Secretary. I know I have not done as much as I should to overcome the present situ-

ation. And I know no one can do it by writing letters. You have got to get right in on the ground floor, see the men, and if they will not see one another themselves, why bring them together and endeavor to hammer into their heads the necessity of organization. Personally, gentlemen, I am a crank on this matter and nothing would suit me better, if I could afford it, than to try and organize all the plumbers into one grand family in the Dominion of Canada. It is with the deepest of regret that I have not been with you on this occasion. But

affairs of an uncontrollable nature have withdrawn the pleasure of this convention from me. I have no doubt that Mr. Thomas Maxwell will give you my few words in a far more satisfactory manner than I could ever have been able to. And in the future I trust I will have the pleasure of meeting one and all of the delegates present. I thank you gentlemen, and will close remaining, the delegate of The Toronto Master Plumbers and Steamfitters Association in mind if not in person.

G. I. FRANKLAND,

Secretary of O.S. of S.H.E."

How Friday Was Spent.

As noted in last issue, many of the delegates returned home on Friday afternoon, the eastern delegation sailing on the "Keewatin" for Owen Sound. The great majority remained over until Saturday afternoon, however, when there was a general scatteration. The Calgary and Edmonton party left the Twin Cities on Friday night at 10.30.

The crowd which remained over for the extra day was a jolly one. The Montrealers had intended to leave on Friday but at the last moment they changed their plans, the only one adhering to the original resolution being Peter Ogilvie. He had a strenuous time getting away at that. The rest of the Montrealers were determined that he was to stay over and, in order to keep him, they invented all kinds of means to cause delay. Ed. Higginbottom had agreed to drive him to the dock in his



"Bill" Heinrich, who collaborated with Jack Marshall in preparing the jokes which were used at the expense of some of the delegates by the entertainers on theatre night. Several irate members of the theatre party spent an earnest half-hour after the performance looking for the pair.

"benzine buggy" and they did everything but blow the machine up in their efforts to delay the departure. As a result the boat was missed at Fort William and it was only by a fast dash to Port Arthur that they managed to make it there.

Toured the Cities.

On Saturday, what was left of the convention crowd, hired automobiles and went for a sight-seeing trip through the two cities. It proved a revelation to many of them. The programme of entertainments had taken every minute that was left during the week after business sessions and consequently few of the delegates had managed to get more than a fleeting glimpse of the two lake cities.

They were, therefore, thoroughly delighted with what they saw. The residential sections are very fine indeed. The view from "Mariday Park," which is situated on the crest of the hill back of Port Arthur, is something to be remembered. From that point, it is possible to look down over the city and right across the waters of the Lake to the distant "Sleeping Giant." On a moonlight night, this view is both picturesque and beautiful.

On completing the tour, the members of the party were delighted to find that the western chauffeur has not yet acquired the skill in lightning calculation which is the chief feature of the taxi meter.

Visited in Winnipeg.

In accordance with arrangements made at the Convention, the Calgary and Edmonton delegates stopped off in Winni-

peg on Saturday and met the officers and some of the members of the newly organized 'Peg Association. A general conference was held, with reference to the work in that city, and the visitors were able to give the local men much useful information.

It is believed that the organization in Winnipeg is on a permanent basis and that the best of results can be anticipated.

Executive Starts.

President Walsh informs Plumber and Steamfitter that the executive will, at once proceed to work.

The appointment of a vice-president for British Columbia has been left to the recommendation of National vice-president Young. He will give the matter mature consideration before reaching any decision. Several names have been suggested for the office. It is felt that a provincial association is needed in British Columbia this year. The conditions, in one city, at least, have been far from satisfactory.

It is probable that some steps will be taken to give full publicity to the preamble adopted on the last day, explaining the reasons for changing the name of the association.

About President Walsh.

President J. E. Walsh, who enjoys the distinction of being the first presiding officer of the Canadian Society of Sanitary and Heating Engineers, is probably the youngest man who has ever reached the highest post in the gift of the associated masters of the trade in Canada.

He was born on September 17, 1878 and consequently now in his thirty-third year. His father, the late M. Walsh, was one of the best known master plumbers in Montreal, or in Canada, for that matter.

Mr. Walsh enjoyed the privilege of a college course and distinguished himself at each stage of his academic career. He graduated from St. Patrick's school with the gold medal and scholarship at the age of eleven years. At Montreal College he studied French Classics and received his degree, B.L. at the age of 20, being gold medalist in the class in rhetoric. Two years later, he graduated with the degree B.A. He was associated for some years with his father and is now managing the business of the M. Walsh Co., Limited.

In addition to the active part he has taken in the National Association, Mr. Walsh has been associated prominently with other interests. He is a Past President of the Montreal Association of Master Plumbers and is a director of the Builders' Exchange, of Montreal.

Mr. Walsh assumes the presidency of the C.S. of S & H.E. at a favorable moment. With the impetus given by the progressive legislation enacted at the convention, the organization should prosper and grow far beyond all records of the past. All are agreed that the new president is the right man to lead at this stage in the development of the new society.

The Next Convention.

Two points have been settled with reference to the next convention; first,



Some Impressions of the Field Sports on Wednesday at the Fort William Arena.—The Centre Group Shows the Runners Lined Up for the 100 Yards Dash.

that it is to be held at Calgary and, second, that it is to be the greatest convention ever held.

Although it will be impossible to make definite arrangements for many months, it is probable that the convention will be held in the first week of July. The Calgary delegates have promised an elaborate programme and they state that they will start publicity work early to insure a big attendance.



John Gordon at the bowling alley—"Now for another strike, boys. We've got 'em going!"

It would take a long time, and considerably more space than any paper could afford to give to relate all the happenings, funny and otherwise, of that one memorable week. The entertainment features were of such a varied nature that some of the delegates were brought out in new, and surprising lights. Who would imagine, for instance, that Lewis LeGow was a raconteur of merit, that Joe. Barnes was a star performer in all lines of athletics, or that John Watson was a singer?

Many funny stories are told about the week's happenings. One of the delegates—no names mentioned—stopped at the Prince Arthur Hotel. The first night he stalked into the dining room and, being in a hearty mood, he ordered pretty nearly everything he saw that looked good. At the close, he was rising to leave when the waiter handed him a check. "Four dollars and sixty-five cents!" gasped the horrified delegate. "Why, man, I am putting up here. Doesn't the rate I am paying cover meals?"

"Oh, no," explained the waiter. "Meals are all a la carte."

The delegate paid and hurried out. "Any free lunch counters or soup kitchens in town?" he asked a member of the local committee. "If not I'll have to imitate Doc Tanner for the rest of the week."

The story goes that Harry Derry secured his spare (note that the word spare is used in the singular) in the bowling match in this wise. He had been knocking down three or four pins every time without a miss. He had never got less than two but he had never been able to get a strike or spare. Finally, he managed to put down eight with his first ball, leaving two standing about two feet apart. "I'll bet you a quarter you can't go right through without touching either," said a spectator. "I'll take you," said Derry. He picked out the smallest ball he could find and carefully aimed at the two feet of space between the pins and let fly. How it ever happened no one can explain, but, when the dust cleared away, it was found that both pins were down.

Baseball Aftermath.

Talk is still heard in many parts of the country with reference to that historic game of baseball. Down in Montreal they talk still of the way that Walsh slid for home; in Toronto, you can hear a great deal about the exploits of Mansell, Macdonald and Shannon; while up in Guelph, they are convinced that Hans Wagner has nothing on Harry Mahoney.

It is agreed on all sides that another game between the East and West should be played at Calgary. In fact, a few ardent spirits declare it should be made an annual event.

Down east they are already planning for next year's game. At an informal gathering in Port Arthur prior to the break up, the following resolutions were discussed and carried:

"That the following be appointed to

direct the ball team of the East at the next convention, to be held in Calgary: William Mansell, Toronto, captain; Sid Adlard, Sault Ste. Marie, catcher; A. L. Macdonald, Toronto, pitcher.

"That this notice be sent to Plumber and Steamfitter for insertion.

"That Mr. Costain take no hat to the next convention."

Jocular Rivalry Shown.

All through convention week, keen rivalry was shown between certain factions. In the first place, the Montreal and Toronto delegates were inclined to chaff each other about the relative size, importance and general worthiness of their respective homes. It is impossible to realize without hearing it done, the amount of scornful intonation that can be put into the one word "Toronto," as rolled off the tongue of John Gordon; and the remarks of the Torontonians with reference to Montreal's oft worsted ball team were scathing in the extreme. And yet Toronto delegates are more than delighted to go to conventions at Montreal and it is likewise noteworthy that the Montreal party returned by boat in order to spend a day in Toronto.

The Fort William and Port Arthur people set the hottest pace, however, in point of open rivalry. Even the members of the sanitary engineering fraternity of the two places have caught the infection. Here is a sample of the way the two camps vied with one another in dispensing hospitality during the big week.

One morning Jack Marshall met some of the delegates, who were staying in Port Arthur, at the convention hall.

"How did you get over?" he asked.



Before starting out, the Calgary and Edmonton party had a group taken, each man wearing one of the straw sombros procured especially for the occasion. Reading from left to right, those composing the group are: J. A. Lock-
 erbie, A. M. Beryman, E. L. Martin, R. J. Priestly, Jas. Marr, sen., A. N. Mc-
 Williams, F. N. McVeigh, G. F. McKnight, J. R. Rogers, P. Kennedy. E. J.
 Young was the "man behind" the camera.

"On the car," was the reply. "Alex. Cameron, of Fort William, came over to get us and make sure that we didn't pay car fare ourselves."

"Huh!" snorted Jack. "Port Arthur will supply taxi cabs for you to-morrow, then."

When the steamer "Assiniboia" pulled in Monday morning with the Toronto delegation, a welcome committee boarded the boat and started to indicate points of interest to the arrivals.

"That's Port Arthur," said Jeff Culliton, of Fort William. "If they would only scrape the mud off the streets, we might be able to see the place."



If the wife of the delegate who appears in this snapshot recognizes the manly form of her lord and master, we predict that there will be one sanitary engineer who will not go to Calgary next year.

"Fort William is just over there," retorted Joe Barnes, of Port Arthur. "I'll get the captain to lend us his biggest telescope and then perhaps we'll be able to see the little town."

Convention Sidelights.

Miracles still happen once in awhile. On the boat trip back Harry Mahoney nearly missed a meal; would have missed it, in fact, if some other members of the party had not obligingly wakened him up.

Plumber and Steamfitter is indebted to a number of the delegates at the convention for photos and for assistance in securing views at the convention. Among others E. J. Farrell, of North Bay, and Tom Maxwell, of Toronto.

At the 1910 convention Harry Munday, of Montreal, suggested that the officers have their reports typewritten before presenting them. The only report submitted this year which was not typewritten was that of a certain vice-president for Quebec. Explanations are in order.

G. F. Frankland, who had been chosen to represent the Toronto local associa-

tion, was unable to get off at the last moment, and the alternate delegate, Tom Maxwell, went in his stead.

John Gordon, of Montreal, is the most optimistic bowler that ever picked two pins off the right end. Every time his ball landed in the gutter he would remark: "Oh, well, we'll beat their heads off anyway." When in practice the genial ex-president can run up 180 every time. Of course, he is not often in practice.

From the moment the Calgary crowd landed in, it was a foregone conclusion that the convention would go next year to the Prairie City.

Harry Knox, of Ottawa, was missed. "Where's Knox?" everyone was asking.

President Walsh now has a rival for the long word championship. Lew LeGrow is in the field.

"Hope Ed. Higginbottom takes his machine to Calgary next year," said Bill Heinrichs.

Form of Contract Agreement

The following form of contract agreement was presented to the Twin City Convention as one worthy of adoption in all sections.

Article I. The contractor, under the direction and to the satisfaction of

Architects, acting for the purposes of this contract as architects and agents of the proprietor, shall provide all the materials and perform all the work mentioned in the specifications and shown on the drawings and details prepared by the said architects for the

which drawings and specifications are identified by the signatures of the parties hereto and become hereby a part of this contract in the same manner and to the same extent as if incorporated

herein, and in accordance with the general conditions printed and endorsed hereon.

Article II. It is understood by and between the parties hereto that the work included in this contract is to be done under the direction of said architects and that their decision as to the true construction and meaning of the drawings and specifications shall be final until the completion of the work for the use for which it was intended, and thereupon if there be any dispute between the contractor and the architects in reference to the construction and meaning of the drawings and specifications which the said architects may have tentatively decided, then recourse shall be had to arbitration as hereinafter provided. It is also understood and agreed



THE WESTERN BASEBALL TEAM

Although defeated the Westerners showed that they knew a few of the fine points of the game.

Top row (reading from left to right)—Mashall (umpire,) Sheehy 1b., Culliton, 2b., Potts, s.s., Robinson, r.f., Evans, Heinrich, c. and 3b., McCarty, c.f.

Bottom row—Kennedy 1.f., Kinney (umpire,) Waltz p., Barnes 3b and c.

such additional drawings and explanations as may be necessary to detail and illustrate the work to be done, are to be furnished by said architects, and that any and all drawings and specifications prepared for the purpose of this contract by the said architects are to remain their property.

Article III. No alterations or additions shall be made in the work except under written order of the proprietor, the amount to be paid by the proprietor or allowed by the contractor, as the case may be, to be stated in such order. Notwithstanding the foregoing provision, however, it is agreed between the parties hereto, that alterations or additions not exceeding in the aggregate ten per cent. (10%) of the price of this contract, may be made upon the written order of the architect, the value thereof to be determined by the contractor and the architect, and in case of disagreement, to be determined by arbitration as hereinafter provided; the terms of this contract, any law, usage or custom to the contrary notwithstanding.

Article IV. The contractor shall provide sufficient, safe and proper facilities at all times for the inspection of the work by the architects or their authorized representatives; shall, within twenty-four hours after receiving written notice from the architects to that effect, proceed to remove from the grounds or buildings all material condemned by them, whether worked or unworked, and take down all portions of the work which the architects shall by like written notice condemn as unsound or improper, or as in any way failing to conform to the drawings and specifica-



The victorious baseball team of the East—From left to right those in the group picture are :—Top row, Jack Marshall (Umpire), W. Taylor, R.F.; Tassie, 3 B.; Beckingham, L.F.; Alex Cameron (Trainer); Mahoney, S.S.; Downs, M.; Sheehy, Walsh, 3 B.; Bottom row, Shannon 2 B.; Kinney (Umpire), MacDonald, P.; Adlard, C.; Mansell, 1 B.

Captain Mansell is shown in the upper left hand corner.

In the bottom right hand corner appears Big Bob Shannon snapped after he had helped in the double play which won the game for the east.

tions, and shall make good all work damaged or destroyed thereby.

Article V. Should the contractor at any time refuse or neglect to supply a sufficiency of properly skilled workmen or of materials of the proper quality, or fail in any respect to prosecute the work with promptness and diligence, or fail in the performance of any of the agreements herein contained, such re-

fusal, neglect or failure being certified by the architects, the proprietor shall be at liberty, after six (6) days' written notice to the contractor, to provide any such labor or materials, and to deduct the cost thereof from any money then due or thereafter to become due to the contractor under this contract; and if the architects shall certify that such refusal, neglect or failure is sufficient ground for such action, the proprietor shall also be at liberty to terminate the employment of the contractor for the said work, and to enter upon the premises and to take possession for the purpose of completing the work included under this contract, of all materials, tools and appliances thereon and to employ any other person or persons to finish the work, and to provide the materials therefor; and in case of such discontinuance of the employment of the contractor, he shall not be entitled to receive any further payment under this contract until the said work shall be wholly finished, at which time, if the unpaid balance of the amount to be paid under this contract shall exceed the expense incurred by the proprietor in finishing the work, such excess shall be paid by the proprietor to the contractor; but if such expense shall exceed such unpaid balance, the contractor shall pay the difference to the proprietor. The expenses incurred by the proprietor as herein provided, either for furnishing materials or for finishing the work, and



It is hinted in some quarters that the East won the baseball match as a result of the superior rooting of the eastern supporters. Here are seen three of the very best rooters—Peter Ogilvie, Joe Laurier and John Watson, all of Montreal. In the distance Sheehy is seen at bat.

by and between the parties hereto that any damage incurred through such default, shall be audited and certified by the architects, and in the event of a disagreement, established by arbitration as hereinafter provided.

Article VI. The contractor shall complete the several portions of the work comprehended in this agreement by and at the time or times hereinafter stated, to wit:—

The contractor shall complete
the whole of the works comprehended
in this agreement by the _____ day
of _____ A.D. 19 _____

provided that the contractor shall, for every day after the date herein fixed for completion thereof (or the date to which the completion thereof may be extended under the terms of this contract) that the proprietor shall be delayed solely

by reason of such other contractor or by reason of extra work being required to be done or by reason of inclemency of the weather, or by reason of delay in obtaining materials caused by strikes or delays in transit or shortage of labor through no default or negligence of the contractor, or by reason of any damage which may happen by flood, fire, lightning, earthquake or cyclone or by reason of the abandonment of the work by the employees by strike or lockout or any cause through no fault of the contractor, then the time herein fixed for the completion of the works shall be extended for a period equivalent to the time lost by reason of any or all of the causes aforesaid, but no such allowance shall be made if in consequence of the contractor's omission to present a claim therefor to the architect within six (6) days' time after the occurrence of said

only upon certificates of the Architects, which certificates shall be issued on the _____ days of each month, and not to be less in the aggregate than ninety (90) per centum of the value of the labor and materials furnished. Progress estimates of the work done and materials supplied shall be furnished in writing by the party of the first part (the Contractor) at the time of his application for such certificates.

Completion.—The final payments shall be made within thirty (30) days after the completion of the work included in this contract, and all payments shall be due when certificates for the same are issued.

When the contractor has completely performed the work in accordance with this contract, he shall give notice in writing to that effect to the architects. The architects shall within fourteen days from the date of giving such notice examine the work for the purpose of ascertaining whether or not the same is complete, and shall within such period either approve and pass the same as complete, and give the contractor his certificate of completion, or notify the contractor in writing as to what objections (if any) he has to the work, and shall give him his certificate of completion immediately on the compliance by the contractor with the requirements of such notification. The issue of the final certificate shall not be delayed beyond the aforesaid period or as soon thereafter as the work is completed in accordance with the architects' notification.

Article IX. It is further mutually agreed between the parties hereto that no Certificate given or payment made under the contract except the final certificate or final payment, shall be conclusive evidence of the performance of this contract, either wholly or in part, and that no payment shall be construed to be acceptance of defective work or improper materials.

Article X. The proprietor shall during the progress of the work maintain at his own expense full insurance, including the builders' risk, on said work, in his own name and that of the contractor, against loss or damage by fire. The policies shall cover all work incorporated in the building, and all materials for the same in or about the premises and shall be made payable to the parties hereto as their interest may appear.

Article XI. If any of the terms or conditions of any general clauses inserted in the specifications shall be at variance with the terms and conditions of this agreement, then all cases the terms and conditions of this agreement shall govern.



President Cooper and his body guard, starting out on their regular nightly round to see that all the delegates were in bed. The biggest men were chosen for this service.

through the contractors' default, in obtaining any use and benefit of the works, pay to the proprietor as liquidated damages for such delay at the rate of six per centum per annum on the total amount of the contract price. In no case shall the proprietor be entitled to claim over six per centum per annum on the said contract price by reason of any special damage from delay.

Article VII. Should the contractor be obstructed or delayed in the prosecution or completion of the works by reason of the act, neglect, delay, or default of the proprietor or architect or of any other contractor or person employed by the proprietor upon the works, or the work-

delay, the architect or arbitrators are unable to make a fair estimate of the extension of time the contractor should receive thereunder. The duration of such extension shall be certified to by the architect, subject to appeal to arbitration as hereinafter provided.

Article VIII. It is hereby mutually agreed between the parties hereto that the sum to be paid by the proprietor to the contractor for the aforesaid work and materials shall be

subject to additions and deductions as hereinbefore provided, and that such sum shall be paid by the Proprietor to the Contractor in current funds, and



The Question Box



Subscribers are Urged to Send Questions to be Answered, or to Comment on Letters Published. Descriptions of Jobs Done or Shop Kinks are Also Invited.

STORAGE TANK UNSATISFACTORY

Editor Plumber and Steamfitter.—I am sending you a drawing of a storage tank that does not give satisfaction from the fact that the supply of hot water seems to be limited and when they want it they do not get it. If you can suggest a remedy, I should be glad to see it in the columns of the questions and answers of your most interesting paper.

Winnipeg, June 23.

TANKS.

We publish the sketch (Fig. 1), that the correspondent has sent in for the purpose of showing the manner of his "hook up." It will be noticed that there are some changes in Fig. 2, which we have drawn for the purpose of showing how the job should be connected in

the general lay out for the job and trust that the subscriber may be benefited.—D.C.H.

CEMENT FOR STOPPING A LEAKY BOILER.

Editor Plumber and Steamfitter.—Do you know of any cement that I can make quite easily that can be used on a steam or hot water job that will be of any use in stopping the leaks that sometimes come? If so will you be kind enough to publish it in the paper in the next issue?

Montreal, June 27.

JOHN C.G.

You will find that there are several cements made and on the market that are guaranteed to serve this purpose very nicely, and that it would pay you to have two or three cans of same in stock constantly. However, in case that you may happen to run "shy" of the same, we will give you a tip that may prove useful. Take some litharge, slacked lime and sand and mix as follows: Litharge, 2 portions; slacked lime, 1 portion; sand 2 portions. The mixture should be wet up with linseed oil and you may have to go some on the jump to apply it as it sets quickly.—D.C.H.

HOW MUCH PIPE EXPANDS.

Editor Plumber and Steamfitter.—If you have any figures available, I wish that you would publish something about the expansion of wrought iron pipe in an early number of the paper. I derive much benefit from the questions and answers and shall feel at liberty to ask more when I see the answer to this question in the paper.

Brandon, June 13

1843

We find it stated that one hundred feet of pipe at freezing point will expand 1.47" when steam at 215 degrees is passed through same. If the steam should be 297 degrees the expansion would amount to 2.12". If you start at about 65 degrees (which is quite more probable) and have the steam at 215 degrees this expansion would amount to about 1.21", while steam at

297 would expand the pipe 1.87". Be sure to figure this matter out on the jobs you put in, or you may find out when you come to "fire up" that you have several broken fittings to make good at a considerable expense and some trouble.—D.C.H.

LESSENING STEAM OUTLET.

Editor Plumber and Steamfitter.—Suppose that you have a steam job on which there are about eight or nine hundred feet of radiation and the steam outlet of the boiler happens to be a three-inch one. Now just how much can I bush this outlet down and be sure that the job will work all right?

Sherbrooke, June 14. BUSHINGS.

We should advise you strongly against bushing the boiler at all if the conditions are as you state, and the job is

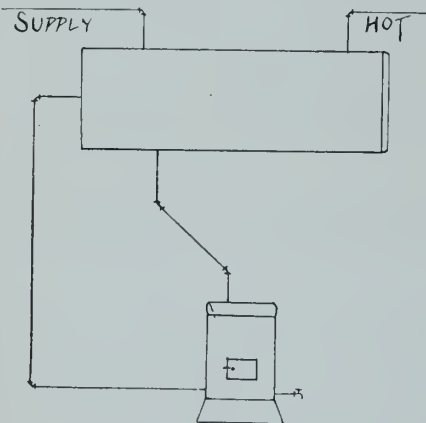


Fig. 1.

order to work properly. In the correspondent's sketch (Fig. 1), it will be noticed that he has omitted to place a cold water tube on the inside of the boiler where it is supplied with cold water. In Fig. 2, we have shown this tube in the place where it should be. The manner in which he has it connected would tend to throw the cold water admitted directly against the circulating hot water whenever any faucet was opened on the job for the purpose of drawing hot water.

Also, in Fig. 2, the hot water is taken from the hot water end, as connected and the second job should work, provided there are no traps on the job. As no sizes are given, we simply give

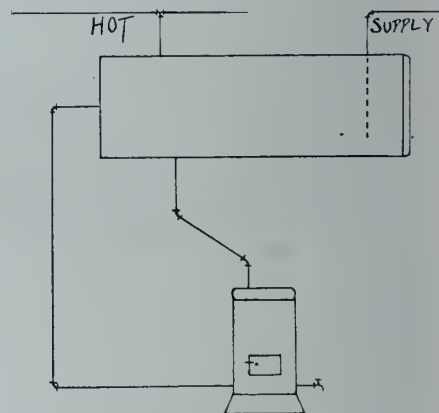


Fig. 2.

to be a simple gravity system. On some of the patented systems, you might be able to bush and get by with it all right, but, as a general proposition you want to remember that the manufacturer has figured out about what the boiler should do and you will stand a better show of meeting with success if you follow his judgment in this respect, rather than your own. Many gravity jobs that, otherwise, would have been successful, have been spoiled by putting too large a load on too small a line of piping, and have had to be done over before they gave satisfaction.—D.C.H.

A Sanitary Survey of City Decided Upon

Ottawa Board of Control Will Have City Covered at Cost of \$2,000—Fullest Information as to Sanitary Conditions Will be Obtained.

Ottawa.—At a recent two-hour session of the Board of Control, it was decided to adopt the recommendation of Dr. Shirreff, the medical health officer, that a sanitary survey be made of the entire city, at an estimated cost of \$2,000. Some time ago the controllers, instead of endorsing what Dr. Shirreff advised, acquiesced in a suggestion to have the men who are measuring houses for the Electric Commission ask a number of questions for the health department when going from house to house.

Dr. Shirreff yesterday told the controllers this would not do; he explained that he wanted more detailed information; and submitted a list of fifteen questions which he wants answered in connection with the sanitary survey he proposes. There was also before the board a letter from the city solicitor which intimated that the board of health has the power to order such a survey and to insist on the city's paying for it.

Controller Hinchey admitted that, legally speaking, the medical health officer's contention was right; but he hardly thought some of the questions to be asked were vitally important, and he felt that possibly some of the information would not be used. He also hinted that an inspection of some city plumbing might do more good than some of the things suggested.

His Duty.

Dr. Shirreff's reply was that he was taking the stand he is taking because he considered it his duty. He strongly advised having the inspection made, and that it cover all the city.

Controller Champagne intimated that if the city solicitor ruled that it was legal, and the M.H.O. considered it advisable, he was willing there should be a sanitary inspection as at first recommended.

"Dr. Shirreff insists, so let the inspection go ahead," remarked Controller Hastey.

This was decided upon.

There was a discussion regarding proposed closets to take the place of certain unsanitary outside ones in some parts of the city. It was decided to have the medical health officer prepare a full report on this, as to the best kind of closet, and the approximate cost. Dr. Shirreff thinks building and all would not cost more than \$15.

Advertisement Criticisms

THE first advertisement reproduced, that of Geo. E. B. Grinyer & Co., Guelph, is in most respects a highly creditable one. It is well written, well laid out and it contains an idea. One of the first essentials in writing an advertisement is to have something interesting to say, some definite fact to state or some strong point to make. In the present case, Mr. Grinyer has taken up his electrical stock as his talking point and has grouped a strong line of arguments around the outstanding fact that the goods he carries are better than any persons had thought could be secured in Guelph. The heading attracts attention at once and leads the reader on to peruse the rest of the reading matter. The wording is forceful, covering all points.

Elliott Bros., Kingston, have a neat ad., outlining the many lines in which they engage. The printer has introduced rather too much fancy trimming; a plainer setting would be more effective.

Bayer & Co., Sydney, C.B., have a good ad., in some respects. The talk presented is concise and full of argumentative force, being well designed for the size and nature of the ad. The one fault is that the name of the company has been given practically no prominence. This

the ad., and pass on again without having discerned the name. The ad. would have no value as far as they are concerned.

Dawson & Green, Blairmore, Alta., have a fairly effective notice. The wording and the arrangement both leave some room for improvement.

David Hall, Peterboro, has a neat and effectively worded ad. The illustration sets off the reading matter and gives point to main argument advanced—the superior quality of up-to-date fixtures.

A Willing Young Worker

The accompanying illustration has a moral all its own—a moral for helpers and apprentices. Don't be afraid to



work. Pitch in with a will and do the best you can.

We here see "Squirrelie," a willing young lad with J. T. Matthews, Burlington, Ont., cheerfully juggling a 30-gal. boiler. "Squirrelie" was not doing it for effect, nor had he any idea that the snapshot was to be taken before it was actually snapped. He had picked up the boiler and was carrying it to the rear of the building where it was required, when the camera caught him in the act.

Mr. Matthews has always been fortunate in having a willing crew of workers.

SCHOOL CONTRACTS.

The following firms have secured school heating contracts: Pennington & Bryan, Cameron Avenue school, Windsor; Noble & Rich, London, Alexandra school, London; A. Rodgers & Co., Hamilton, Dunnville high school; E. S. Earl, Milton, the Milton public school; Keyes & Bull, Weston, addition to Weston school.

"Why, I had no idea that there was Anything like this in Guelph!"

It is scarcely the estimation that we hear when people see our Electric Fixture Showroom for the first time. They are right. There is nothing like it in Guelph and we know it, and want you to know it, too. Fixtures that are beautiful, and fixtures that are really plain in design—but all of them superior that you can't beat, even in Toronto. Put up Free, too—so other expense than the price of the fixture you choose.

The Guelph Plumbing, Heating and Electrical Works

26 WEST MARKET SQUARE

Geo. E. B. Grinyer & Co., Props.

Watch Our Advt. Phone 505

ELLIOTT BROS. 77 PRINCESS STREET KINGSTON

TELEPHONE 10 when you want the Gas Meter connected and Gas Pipes put in. All orders will be promptly attended to. We carry a nice assortment of Gas Ranges and one, two and three burner Gas Stoves.

PLUMBERS, TINSMITHS AND HEATING ENGINEERS Headquarters for Tin, Sewer Pipe, Etc.

The PLUMBING STOCK

The stock gets into a plumbing job the greatest part of the period of its existence. Buyer buys the best. Couple the quality of material with skill of the workman and you know the result. Employ Bayer & Co. and you get the desired result. Heating & Plumbing



DAVID HALL

Plumbing and Heating IF YOU DON'T, YOU SHOULD!

DAWSON & GREEN

Blairmore. Alberta.

may have been done purposely but the value of such an artifice is extremely doubtful. Many readers would skim over the page, halt for a moment at

When the sheet is turned in the office man prices the material and makes out his bill for the customer and then files away all the monthly sheets in one compartment of his file. Should a customer complain of too great a charge when he receives his bill or monthly statement, the shop owner can very readily hunt up this card and show him a complete record. Frequently a customer complains that the workmen only spent, say, five hours on the job, while a charge is made for eight hours' time, often forgetting that there is work such as cutting and threading pipe, which can be more conveniently done in the shop than on the job. This card is intended to keep a record of just such things, and to be used in satisfying customers.

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POINTS ON HEATING

CHAS. H. DENISON



CHAPTER 9.

One bitter cold day last winter when the wind was doing hurricane stunts and the mercury was doing its best to dip below zero, one of the neighbors came over to the house and said: "Old man I wish that you would come to my place for a little time and see if you can tell me why it don't heat up better than it does. The steam job seems to be getting weaker all the time."

"That's rather curious," I said to him, "for it worked all right last winter and you were sure satisfied with it." "I know that too," he answered, "but the blamed thing seems to have all petered out in a bunch and I want you to look it over right now." So I put on my coat and hat and we went over to his place. The house certainly was not comfortable, ice on the windows, the kids all humped up near one end of a radiator and, glancing at the thermometer in one of the rooms, I saw that it was just about 62 degrees, and that, on a zero day, with a strong wind blowing, means considerable discomfort for most people. We went into the cellar and my friend had a couple of pounds of steam up and the boiler seemed to be all to the good. Fire right, plenty of water and strong steam. Then we went up stairs again and I began to look through the different rooms. I noticed that all the radiators were about half heated up. So I stepped up to the automatic air valve and found that it was not working as it should. I borrowed the key and tried to adjust them. Got the radiators all hot and in less than an hour you could begin to see them all smiling. They had been too miserable to even grin before that. To make a long story short, those air valves were a very cheap affair and never should have been put on the job at all.

Valves Were Faulty.

It was practically impossible to adjust them so that they would stay right and get results. If left open wide enough to get action, then they would squirt water, and if closed down tight enough to stop the water, you could not get enough air out of the radiator so that it would heat in the proper manner. Ever have that kind of an air

valve? Then you know how my friend felt and can judge as to what remarks he made at this time. It turned out that he was to blame, for he had ordered a cut in price made on the job at whatever point it could be done. I told him the name of a reputable air valve that would give good results and he put them on, after which the job worked to a charm. Now you would think that, after all the years that have passed, an incident of this kind would be an impossibility, but it seems to the contrary. I have seen many a hot water job that the owner swore, up and down, was a failure. All that was necessary to do was to go to the job and let the air out of the radiators and the job worked all right. May be it is the steamfitter's fault in not explaining, perhaps some people simply are too dense to keep a thing learned anyhow. You can take your choice. The air valve is used to provide for the escape of the air in the system and should be first class in every respect, for, in the ordinary steam or hot water job, if the air does not get out, the heating power of the radiator is going to be mighty slim when most desired.

Should be Automatic.

The valves should be automatic and of such a reliable adjustment that they can be set and depended upon and not have to chase around to adjust again at about every change of the amount of steam that arrives. The first cost of such a valve may be greater, but it will be found to be less after you have thrown away a cheap set, not to say anything in regard to the extra coal that you have burned and the annoyance.

Sometimes, however, more than the radiators should be air valved. Some fitters will throw in long lines of steam mains and expect that the air valves, that are on the radiator, are going to provide proper means of escape for the air. This does not always prove to be the case and the job fails to work properly because the air lays in the main, or mains, frequently to the extent of causing the pipe to bend and the manner that this takes place is as follows: In the larger sizes of pipe the steam will pass over the air which will remain along the bottom of the steam pipe.

Such a condition makes the pipe hot at the top while the bottom is cold, or at least comparatively cool as regards the top. Pipe in that condition will spring out of shape from the expansion and will be very apt to destroy some of the connections somewhere along the line. To relieve such conditions large air valves should be installed on the mains every 125 feet, at least. Not the ordinary little dinky air valve, but one built for the purpose and having an outlet at least three-quarters of an inch in diameter.

Will Remove Air.

Such a valve will remove the air congested at the points and make the duties of the air valves on the radiators very much lighter, thus giving very much more satisfactory results. Sometimes it is necessary, in running the pipe lines, to jump over a beam or some other obstruction, and then drop down again. At the high point of the loop thus formed an air valve should be placed or there is liable to be a pocket of air at that point the bad effects of which will be apparent when the job is started. In some cases, such as the running of a main above six inches in size if the run is a long one and not reduced, it may be necessary to tap the pipe (or to use a tee with one inch outlet at the top) and drop a pipe to very nearly the bottom of the said main and on the mentioned small pipe put the air valve. In this manner the cold air will be taken out of the pipe entirely while in some other instances it would be taken from the top only and the pipe would still "buckle."

Be Particular.

I have mentioned this story and the following facts regarding the air valves, because it seems to me that the average fitter is not particular enough in the choice and use of same. He thinks that the air valves on the radiators ought to do the whole business, whereas the truth of the matter is that half of the time they will not and then if the job works slowly or maybe don't work at all, he either condemns the boiler, the radiation, the air valves or else the journeyman that put in the work.



Exterior View of the New Store of A. Welch & Son, Toronto.

Aggressive Methods of Heating and Sanitary Engineers

A. Welch & Son, Toronto Have Enlarged Their Premises—A Handsome Show-room for Stoves and Sanitary Appliances—Thorough System Used for Checking Material.

THE new stove store and plumbing shop of A. Welch & Son, Queen street west, Toronto, has been completed. Finding this spring that their business had outgrown their old premises, the firm decided to annex the store next to them. Having purchased the block, in which they were located, they took over the next store, tore out the wall between and made one large showroom for the display of stoves and plumbing fixtures. A new front was put in and, as will be seen by the accompanying illustration, a window of unusual size, for display purposes, has thus been provided.

Only the best sanitary appliances are shown in the store, the bulk of the stock being kept in the plumbing department, which is behind the offices,

with an entrance on Soho street, as shown in the plan. Here a complete stock of all material needed for sanitary and heating work is shown. Welch & Son keep a large staff of men at work in the sanitary department.

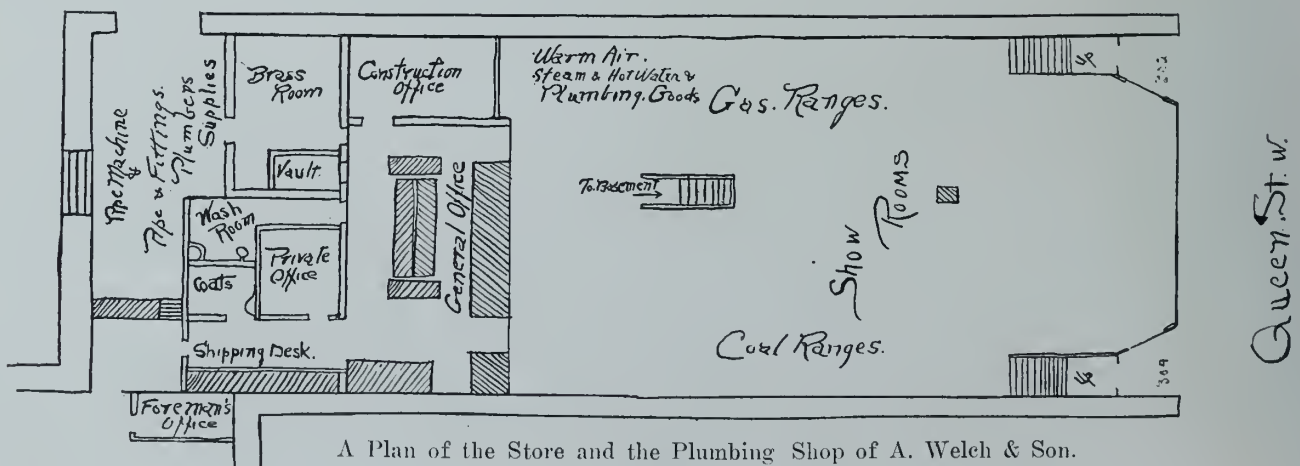
Checking of Material.

A good system has been evolved to check up and keep track of all material used in this department. A stock clerk is responsible for everything that is taken out of the shop. Before going to work, each employee signs out a requisition slip for what he will require and hands it to the stock clerk, who supplies him with what he needs. If at any time during the day, supplementary supplies are required, the same formula is gone through, so that it is possible to tell exactly what material has been

taken out for each job in hand. At night, if there is anything left over, the workman brings it back and it is credited to the job in question. In this way, thorough tab is kept on the material and each foot of pipe used is accounted for and credited to the proper party.

This system removes effectually all danger of waste and leakage. Many failures have been brought about largely through the carelessness and prodigality with which material was handled. Forget to charge some one small thing on each job handled, and, although it makes little difference in the price of any job, it makes a tremendous difference when totalled up at the end of the year. Welch & Son have found that the plan they are now following solves the difficulty nicely.

Soho St.



A Plan of the Store and the Plumbing Shop of A. Welch & Son.

News of the Manufacturers and Wholesalers

MORE MERGER TALK.

Rumors are heard of negotiations tending toward the amalgamation of firms in the heating line but, so far as can be learned, there is nothing definite as yet. It is certain, however, that negotiations have been, and still are, pending.

COMPANY REORGANIZED.

A reorganization of the Pease Foundry Co. was recently put into effect, whereby F. J. McKinnon becomes president, J. L. Ross remains as vice-president and R. B. McKinnon becomes secretary and salesmanager, vice J. N. Bell, who has gone to Winnipeg as manager of the Pease-Waldron Co. It is possible that the changes may result in a widening of the activities of the company ultimately.

INDUSTRY EXPANDING.

The Wallaceburg News states that the Wallaceburg Brass & Iron Manufacturing Co. is growing rapidly, having a pay roll of 65 now. More machinery is being added to the plant continually. Will C. Power, traveling representative, leaves shortly for a trip through the West. It is his intention to go right through to the coast.

A NEW WRENCH.

Macdonald & Sons will have their new wrench on the market some time next month. The wrench was shown and demonstrated at the National Convention.

After the convention, P. E. Macdonald went on as far west as Winnipeg, returning to Toronto after a week's sojourn there.

Nothing further has been heard with reference to the rumored brass merger.

IN NEW FACTORY.

The Canada Metal Co., Toronto, are now settled in their new factory on Fraser avenue. The new factory is considerably larger than the previous premises of the company on William street and is equipped with the most modern machinery. An auto truck has been purchased for city delivery.

A HEARTY SEND-OFF.

A jolly crowd gathered at the R. & O. wharf at Toronto on Wednesday afternoon, including C. E. Oldacre, of the Gurney Foundry Co., Tom Alcock, of Gurney Foundry, Angus Groff, of Steel and Radiation, Stanley Alexander, with J. R. Seager, Tom Welch, of A. Welch & Son, and a couple of press representatives. Mr. and Mrs. Seager joined the party later on. It was quite evident that the gathering boded ill for someone for all in the party were loaded down with bags of confetti, old boots, etc.

The previous day Fred E. Ellis, of A. Welch & Son, formerly with Gurney, Tilden and before that with the Gurney Foundry Co., had been married to Miss Margaret C. Ralston, daughter of Mr. and Mrs. John Ralston, 62 Churchill avenue. The word was passed around



Fred Ellis and Bride Watching the Party from a Place of Safety.

that the happy couple intended to leave on the "Toronto" for a honeymoon trip to the Thousand Islands and there was, consequently, a gathering of the clans to ensure them a hearty send-off.

Mr. and Mrs. Ellis were the eighth newly married couple to arrive on the wharf and they found some difficulty in getting through the confetti which strewed the path to the boat. This difficulty was increased by the determination of the waiting party that they should not reach the boat until they had been properly showered with confetti and rice. They finally did win their way to the gangway and made the boat just in time.

From all of which, it will rightly be inferred that both bride and groom were extremely well-liked and that all their

friends and acquaintances wished them all joy and happiness.

It might be added that Stanley Alexander had a very narrow escape. It was on his "tip" that the party had assembled and, when 2.50 arrived and the bridal party had not appeared, the other members began to plan what they would do to him if they found that they had been brought that far on a wild goose chase. It had just been decided that he would be unceremoniously shoved off the wharf when the bridal party appeared.

The marriage was performed at the home of the bride's parents by Rev. Mr. Ingram. Miss H. W. Ralston played the wedding march. The bride, who was given away by her father, looked charming in a gown of white embroidered net over taffeta, and carried a shower bouquet of roses and lily of the valley, the gift of the groom, Miss Mabel Ralston, dressed in ivory satin de chene, carrying a bouquet of pink roses, and wearing a pearl ring, the gift of the groom, assisted the bride. Six young lady friends of the bride formed an aisle of white satin ribbon through which the bride passed to the archway. Lorne H. Gardhouse, nephew of the groom, was best man, and was the recipient of a gold locket.

MCLAREN-BUTT.

The congratulations of the plumbing trade are forthcoming to John A. McLaren, manager of the Canadian Brass Co., of Galt, who on June 7th, was united in marriage, to Miss Mabel Elizabeth Butt, daughter of Rev. and Mrs. W. H. Butt, of Centralia, Ont.

The ceremony was performed at high noon by the bride's father, in the presence of immediate relatives of the bride and groom. After the wedding breakfast, the young couple left by auto for London and Toronto, whence they took boat for a trip down the St. Lawrence. Upon their return from the honeymoon, the employees of the Canadian Brass Co. presented Mr. McLaren with a handsome leather lounging chair and an address.

Mr. McLaren is well-known to the plumbing and heating trade throughout Ontario and the West, having covered that territory as traveling salesman, for a number of years. He has hosts of friends who join in wishing a long and happy life to him and his bride.

Operations in New Plant Now Under Way



A View of the New Plant of the Canadian Tube and Iron Co., Montreal.

Montreal, June 21.—The plant of the Canadian Tube and Iron Company, Limited, Montreal, is now practically completed, and operations in the mill are already under way, with the prospects for the future highly satisfactory. Their offices and works are located near the banks of the Lachine canal on property comprising 300,000 sq. feet. They have therefore every shipping advantage by water, in addition to railway sidings, that assure delivery by all lines leading from the city. In the construction of the various buildings, which are of structural steel and concrete, they have been made as fireproof as possible, and another feature is the excellent provision for lighting. The machinery is modern and the arrangements throughout provide for economy and dispatch.

This new company manufactures black and galvanized pipe in sizes from $\frac{1}{4}$ in. up to 4 in., also square pipe and bedstead tubing, the latter in all the sizes required by the manufacturers of bedsteads. Couplings are also made, and nipples will be added later on. In addition, plans are now ready for the addition of a modern plant for the manufacture of all kinds of bolts and nuts. The various departments are those that are necessary to a plant of this kind.

The Canadian Tube and Iron Company have representatives in all the large centres throughout the Dominion. They have also a pipe warehouse downtown in Montreal. The manufacture of their different lines has been placed under the supervision of experts to guarantee the quality of their goods. The officers and directors of the company are: J. W. McConnell, president;

J. L. Waldie, vice-pres. and man. director; A. H. Hough, sales manager and director; W. Mosley, works manager and director; H. Worrall, secretary-treasurer; W. Molson MacPherson; H. A. Lovett, K.C., Dr. Milton L. Hersey.

NEW TERMS ADOPTED

The plumbing supply houses have adopted the following terms: All goods bought, say, in June, are subject to a cash discount of 2 per cent. if paid on or before July 15, and are net on August 15. These terms apply to both city and country trade.

A deduction of 10 per cent. is to be made on all goods returned where no fault exists on the part of the supply house. This is to stop the practice of ordering more than is required and using what is needed then, after leaving the unused material around until depreciation sets in as a result of rust, asking the supply house to accept same for credit.

LOOSE-LEAF CATALOGUE

A very handsome loose-leaf catalogue has been issued by the Mechanical Rubber Co., Cleveland, Ohio. It is printed on fine quality and bound in a brown shaded cover. Each article shown is illustrated and described fully and clearly, the illustrations being in many cases colored. A brand index at the start is of great assistance. Another good feature of the catalogue is a page devoted to suggestions for readers anxious to get information relative to some one article. One of the suggestions, for instance, reads: "For pumps, water piston, see pages 15, 33, etc."

Plumbers at the Guildhall

London, Eng.—Over 200 delegates of the Operative Plumbers of Great Britain and Ireland assembled on June 8 at the Guildhall where they were greeted by the Lord Mayor, who is this year the Master of the Plumbers' Company.

The main topic under discussion was the necessity for technical education and a strong stand was taken on this question. The following resolutions were adopted:

1. That the principle of apprenticeship for plumbers, combined with sound technical education, should be systematically advocated and adopted in connection with the national registration of plumbers.

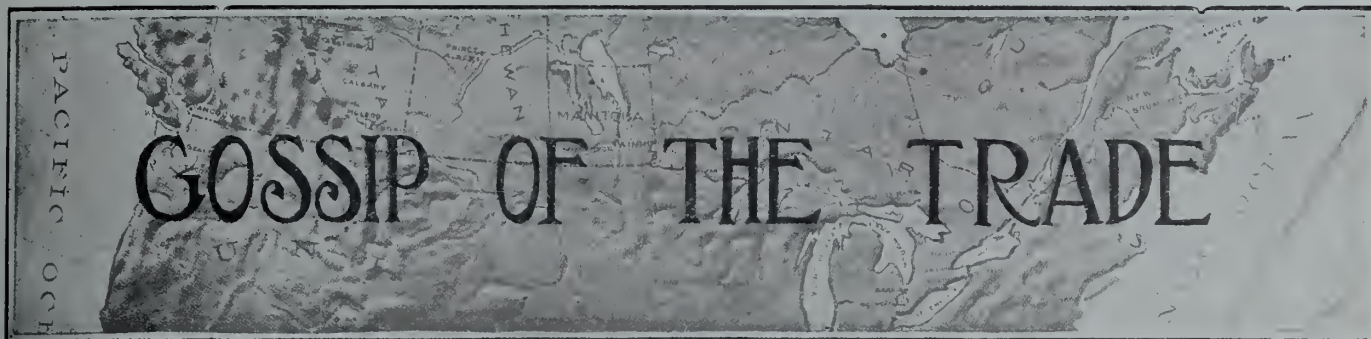
2. That the education authorities of the United Kingdom should recognize the value of this principle as necessary to sound industrial training, and should provide facilities for the further extension of plumbing classes in all centres where the plumbers of the locality are prepared to co-operate with the authorities in securing a sufficient number of student plumbers working at the trade and dealing with other practical questions to ensure the successful working of the classes.

3. That the Board of Education should duly recognize these classes for the purpose of grants made by the board, and the board should further recognize in connection with these classes such examinations as may be prescribed by the central body for the national registration of plumbers and approved by the board.

From the tenor of the resolutions adopted, it will readily be seen that the trade in the Mother Countries is most strongly in favor of aggressive steps to further technical instruction.

COVERS THE FIELD

Of the hundred odd delegates at the Convention, only four were found who did not take Plumber and Steamfitter. Of these four, three came forward voluntarily and subscribed. The fourth promised to become a subscriber and will very shortly. Plumber and Steamfitter certainly covers the field.



New Brass Concern

Hamilton, Ont., has secured four new industries, one of them being the Mayor-Brown Co., manufacturers of brass goods.

Buys Out Business

Arthur Best has purchased the plumbing and tinsmith business of Chas. Richardson & Son, Harrow, Ont. He has moved to a new and larger store in the Runiball block.

Open Shop Declared

A number of the plumbing and tinsmithing shops in Vancouver have announced their intention of keeping "open shop" in future. Labor difficulties have been experienced there for some weeks now.

Inspector for Hamilton.

The Hamilton, Ont., board have disposed of the matter of appointing a plumbing inspector. There were several applicants for the position, and it was agreed that it should be given to David Wark, a practical plumber. The board recommended the council to appoint him at a salary of \$80 per month, and it will make a scale of charges in connection with the issue of building permits to pay his expenses.

Leave R.M.A.

There has been some trouble in the Retail Merchants' Association, Toronto, and the Toronto Master Plumbers' Association have withdrawn from that body as a result. Just what the plumbers will now do is problematical, but it is certain that they will continue organized. A committee has been appointed to take up the question of providing for the future of the association.

Against Vaccination

H. A. Knox, Ottawa, is quite apparently an anti-vaccinationist. In a recent issue of the local papers, he used his advertising space to insert a poem written by himself in prose form, in which he takes occasion to rap the theory of immunity through inoculation. The poem was as follows: "Vaccination is judged by some to be no use except to decay creation. And others judge it's just the thing to make a healthy nation.

If dirt is dirt and your blood is clean, why mix the two together?

"Destroy the germs by other means, Which nature has provided. There'll be no kick from a powerful clique, Whose own opinion guides them."

Open Plumbing Department

H. H. McArthur, Greenwood, B.C., has opened a plumbing and tinsmithing department in connection with his carpenter shop on Government street. The department will be under the management of George Clerg.

Contract is Let

Partly as a result of the recent convention, the West Algoma Agricultural Society have decided to install sanitary plumbing on the grounds at Fort William and to have an adequate water service to the stables and other buildings. The contract was let to Culliton & McRae.

Compulsory Installation

The Oshawa Board of Health has found that the by-laws of that town with reference to sanitary matters are being disregarded by certain property owners. At a recent meeting it was decided to authorize the commencement of the work of installing the necessary plumbing in a business block in that town, the work to be carried out as provided for by law.

Master Plumber Passes Away

John Limerick, Fredericton, N.B., passed away at his home on St. John Street, on Friday, June 23, after an illness extending over a period of six weeks. He recently underwent an operation at the Victoria Hospital for cancer, which had been giving him serious trouble for many months back, and three weeks ago last Saturday he was removed to his home, where it was quickly seen his recovery would be doubtful. The news of his death, therefore, did not come as a surprise to his immediate friends and relatives. Mr. Limerick was fifty-six years of age and is survived by a widow and three sons, Arthur, Sterling and Harold, all of whom reside in that city. The deceased was a son of the late Arthur Limerick,

and for many years carried on a plumbing and tinsmith business in this city under the firm name of A. Limerick & Son. He was a skilled workman and a man of kindly disposition who had many warm friends who will regret to hear of his death.

BUILDING AN ANNEX

A three-storey annex is being built to the warehouse of the Northern Engineering and Supply Co., Fort William. The building, with the exception of the floor, will be of re-enforced concrete, practically fireproof throughout. The building is destined to relieve the congestion which at present exists in the warehouse and shop of the company.

It is estimated that the addition will involve the expenditure of \$15,000.

News Briefs

T. Ochs is opening in the plumbing business at Calgary.

Longnet & King have started in the plumbing business at Calgary.

Boyd & Rowan are commencing a plumbing business at Moose Jaw.

Geo. Johnson has retired from the firm of J. E. Campbell & Co., plumbers, Vancouver.

Haywood & Dodds, plumbers, of Victoria, B.C., have opened a branch at Nanaimo.

Battie & Frankfurt, Comber, Ont., have considerably enlarged their premises and added furniture and tinsmithing departments.

Wm. Elrick, late of Glasgow, Scotland, has accepted a position as foreman of Illsey Bros.' tinshop, at Castor, Alta.

The tender of W. C. Anthony has been accepted by the Public School Board of Georgetown, for heating and ventilating the school building. A steamheating plant will be installed.

A recent storm at Fitzroy Harbor, created such havoc that Robt. Templeton has a record amount of business ahead of him in his tinsmithing and plumbing departments.

PLUMBING AND HEATING MARKETS

MONTREAL.

Montreal, June 30.—There has been no let up to the business activity in the plumbing and steam-fitting trade. Reports generally indicate highly satisfactory conditions. Montreal is receiving its full share of the building work that is in progress this year and the members of the plumbing and steamfitting trades are profiting by it. Houses are going up rapidly in the outlying sections and elsewhere and the number of larger buildings in course of erection is appreciable. Jobbers report a general demand.

Iron Pipe and Fittings.—Demand for iron pipe is heavy and is received from all parts of the country. Manufacturers are working up to capacity.

Discounts on fittings are: Malleable fittings 40; cast iron, 65; standard bushings, 70; headers, 60; flanged unions, 65; malleable bushings 65; nipples, 75 and 10; malleable lipped unions, 65 p.c.

Enamelware.—Orders for enamelware are being received fairly freely. There is nothing new to report in this regard, enquiry being satisfactory.

Soil Pipe.—The quantity of soil pipe going out these days is large and is an indication of the work to be done in the near future. Quotations are unchanged. For medium and heavy pipe up to 6 in., 70 and 10; 7 and 8 in. pipe is 50; light pipe 60 and 10; fittings, 70 and 10 p.c.

Lead Pipe.—There is a continued good demand for lead pipe with no new feature presenting itself. Discounts are 30 p.c. on lead pipe and waste; 50 p.c. on traps and bends; caulking lead is quoted at 4¾c. a lb.

Solder.—Solder is held firmly and is receiving considerable attention from the trade, business creating quite a demand. Local prices remain unchanged: —King solder, 26c.; strictly solder, 25c.; commercial, 24c.

Metals.—Tin is now quoted at 48c., and has lost much of the strength that marked it two weeks ago. While the price is still rather high, the market is regarded as weak. Buying has been in only small quantities. Copper and lead are both firmer, especially the former.

TORONTO.

Toronto, June 28.—There is a brisk tone to the plumbing and heating business in this section. It is quite apparent that contract work, particularly in the cities, is well under way. In Toronto the demand has been particularly heavy and the manufacturers and supply houses have all been busy.

This is due largely to the fact that a great deal of residential building work is going on. The larger contracts, ex-

cept in a few odd cases, have not yet reached the stage where the plumbing or heating work can be started.

Solder continues to advance and there seems little hope of a reduction until tin comes down to a normal price again.

Enamelware.—Good sized orders are being filled, largely for residential work. The demand has been markedly for good quality material. There has been less call this year than ever before for the cheaper grades. Prices remain the same.

Boilers and Radiators.—Heating firms are quite busy for this season of the year. The manufacturers are filling sized orders and are being hindered less by the holding up of shipments owing to delay in building operations. Although contractors still find it hard to obtain brick, most boiler orders, placed earlier in the season, have now been accepted. Advise orders are still being received in large numbers.

Soil Pipe.—There is a heavy and consistent demand but it is said that cutting continues. On medium and heavy, discounts still range from 70 to 10 to 75 and 10. On the 7 and 8-inch sizes, the discount is 50 per cent.

Lead Pipe.—There is a good demand, prices remaining firm. Lead waste sells at 9c. per lb. with a 30 per cent. discount. Caulking lead is quoted at 4½ cents per lb. Traps and bends are discounted at 50 per cent.

Iron Pipe and Fittings.—There is a good, steady movement, with no price changes to report. Cast iron fittings are quoted at 65 to 70. Malleable fittings stand at 37½ to 40 per cent. Other quotations are: cast iron bushings, 70; malleable, 67½; nipples, 75 and 10; headers, 60 and 10, although some quote 67½ and 70; flanged unions, 70; malleable-lipped unions, 65 per cent.; galvanized pipe, \$6.18; black pipe, 1-inch size, \$4.54.

Solder.—The unprecedented price of tin is forcing solder steadily up. Wiping is quoted at 24 cents still, although some houses are asking 26 cents for the better grades. Half-and-half has gone up a cent and now sells at 27½ cents. These prices are exceptionally high but it is very doubtful if any relief will come until the tin situation takes a turn for the better.

Metals.—A brisk business in nearly all metals on the list is reported by Toronto metal merchants this week. Some firms report that they are busier than at any other time this season. Prices are well maintained, and prospects are for continued firmness.

The tin market during the week has not justified the predictions of some

metal experts who thought that the lower prices reported last week indicated that the bottom was falling out of the market. Tin has fluctuated up and down all week but the trend has been upward for the most part. The market closed at 48 cents.

WHAT FOR THE STREET ELL?

Editor Plumber and Steamfitter,—What does your practical man think of the fitting known to the craft as the "street ell"? N. S.

He thinks this: That he would not use one of the street ells, if it were possible to get along without it by substituting any other fitting—and it most generally is. An ell and a close nipple will "make up" in less space than a street ell and with less chances for a leak to appear. These street ells are generally threaded so indifferently that they do not make a good fit as to the threads and we notice that leaks are apt to appear in many places where they are used. They are far from being ornamental and no one can say that they make what is called a mechanical looking job.

WHY DO BOILERS CRACK?

Editor Plumber and Steamfitter,—Will you tell some of the reasons why the cast iron boilers sometimes crack, either at the first firing, or at a later period of time? JAY F.

Carelessness in "cinching up" the boiler is the cause of many a cracked section that has been laid to a "flaw" in the iron. The water going out of the boiler, for any one of several different reasons, and the admittance of cold water to the hot boiler is another reason for cracked sections. The section may be cracked at the time that the boiler is set up and no one the wiser, though this happens rather infrequently. To guard against this latter point, one should sound the sections with a hammer before they are made into place. You can easily tell by the sound given forth whether or not the section is whole.

The National Grain Stooker Co. will erect a factory at Portage La Prairie.

A company to be known as the Saskatoon Cordage and Flax Fibre Co. will locate at Saskatoon.

The plant of the Canadian Car Foundry Co., at Amherst, N.S., was damaged by fire to the extent of about \$200,000.

The Great West Saddlery Co. will build a factory and wholesale house in Lethbridge, Alta. An option has been secured on a desired site. The new plant and stock will cost \$250,000.

Roll Rim Sink Perfection

We can supply you with the latest improvements in this line. The sink with the new shape. No more chipping around the Strainer. In great demand. Let us have your orders early for these Sinks.

Plumbing Supplies of All Kinds

THE NATIONAL PLUMBING SUPPLY CO., Ltd.

115-117-119 ADELAIDE ST. WEST

PHONE ADELAIDE 733; ADELAIDE 732



"Miller" Hot Water and Steam Radiator Valves

The bodies and bonnets of our Hot Water Quick Opening Radiator Valves are made in one piece, thus having a great advantage over other valves, as it leaves one less joint for possible leakage. The cone-shaped Disc prevents sticking.

Our superior Steam Radiator Valves have very low seats and a high lift of Disc.

We manufacture both valves from $\frac{1}{2}$ " to 2", with or without union, also union elbows.

Every valve is thoroughly tested and has an unlimited guarantee. They are built for service. Ask your jobber for them.



Hot Water Quick Opening Radiator Valve.



Steam Radiator Valve.

MILLER LIMITED, - LONDON, CAN.

SUPPLY

"Kerr" Radiator Valves

on your heating work, and your valve troubles are over

We charge the price and furnish the reliable goods

The

Kerr

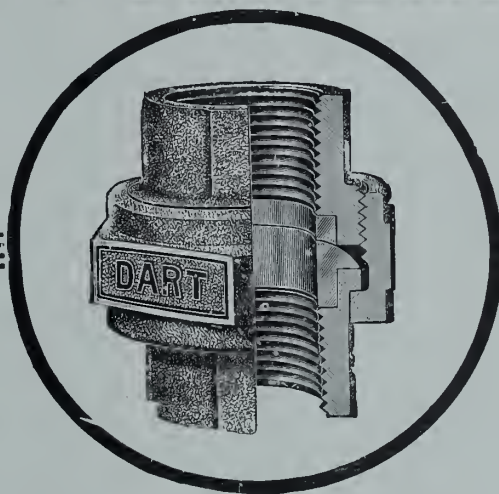
Engine

Co., Limited

Walkerville - Ontario



Look for Our Name "KERR" on All Genuine KERR VALVES



The BRONZE to BRONZE Connection in

DART UNIONS

Prevents rust and corrosion at the joint, so assures a perfectly tight and lasting union.

Dart Unions make joints quickly and easily, whether in or out of line—joints that stay tight until deliberately loosened, then are just as good for use as before.

Your jobber will supply you, and their use will save a lot of installation time.

They need no further attention when installed.

DART UNION CO., Ltd., TORONTO

Condensed or "Want" Ads.

MISCELLANEOUS.

ADDING TYPEWRITERS write, add or subtract in one operation. Elliott Fisher, Limited, Room 314, Stair Building, Toronto.

YOU DON'T buy a National Cash Register—it pays for itself. Saves money. Prevents mistakes. We can prove it. National Cash Register Co., 285 Yonge Street, Toronto.

ACCURATE COST KEEPING IS EASY if you have a Dey Cost Keeper. It automatically records actual time spent on each operation down to the decimal fraction of an hour. Several operations of jobs can be recorded on one card. For small firms we recommend this as an excellent combination—employees' time register and cost keeper. Whether you employ a few or hundreds of hands, we can supply you with a machine suited to your requirements. Write for catalog. International Time Recording Company of Canada, Limited; office and factory, 29 Alice Street, Toronto.

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COUNTER CHECK BOOKS—Especially made for the plumbing and steamfitting trade. Not made by a trust. Send us samples of what you are using—we'll send you right prices. Our holder with patent carbon attachment has no equal on the market. Supplies for binders and monthly account systems. Business Systems, Limited, Manufacturing Stationers, Toronto.

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FIRE INSURANCE. INSURE IN THE HARTFORD. Agencies everywhere in Canada. (tf)

HUNDREDS OF TYPEWRITERS of every make and condition are being traded in as part payment on the famous MONARCH. Price and quality are the levers we use to prevent over stock. We believe we can give the best bargains in rebuilt typewriters in Canada. A postal will bring our catalogue and full information. The Monarch Typewriter Co., Limited, 46 Adelaide Street West, Toronto.

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THE "Kalamazoo" Loose Leaf Binder is the only binder that will hold just as many sheets as you actually require and no more. The back is flexible, writing surface flat, alignment perfect. It cannot get out of order. No exposed metal parts or complicated mechanism. Write for booklet. Warwick Bros. & Rutter, Ltd., King and Spadina, Toronto.

WAREHOUSE AND FACTORY HEATING SYSTEMS. Taylor-Forbes Company, Limited. Supplied by the trade throughout Canada.

BUSINESS CHANCES.

FOR Sale Plumbing and Heating and Tinsmithing business in city 50,000, first class stand and good line of customers. Good reasons for selling. Apply Box 575 Plumber and Steamfitter, Toronto. (16)

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\$1,500 will buy a half interest in a Plumbing and Heating business that paid last year 400% on the investment. Box 514 PLUMBER AND STEAMFITTER, Toronto. (17)

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MacLean Publishing Co., 143-149 University Ave., Toronto

DIRECTORY OF MANUFACTURERS

Plumber and Steamfitter receives, from time to time, enquiries for the names of manufacturers of various lines. These enquiries come from firms who usually intimate they have looked through Plumber and Steamfitter but cannot find any firm advertising the line in question. In many cases these firms are anxious to secure the information at once. This page enables manufacturers to keep constantly before the trade lines which it would not pay to advertise in larger space.

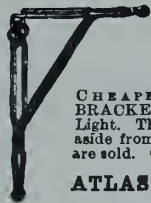
EMERY WHEELS.



Canadian Hart Wheels

442 Barton St. East, Hamilton
Corundum and Emery Wheels
Grinding Machines, Beaver
Oil Stones.

SHELF BRACKETS.



Will Hold Up a Shelf

That's what a shelf bracket's for. For this purpose there can be NOTHING BETTER. NOTHING CHEAPER than the BRADLEY STEEL BRACKET. It is well Japanned, Strong and Light. The saving on freight is a good profit aside from the lower price at which the goods are sold. Order direct or through your jobber.

ATLAS MFG. CO., NEW HAVEN



THIS IS THE DAY OF

INVESTIGATION

Get in line and let us prove to you that the

GENUINE

Armstrong Stocks and Dies

ARE THE BEST.

Catalogue on request.



The Armstrong Mfg. Co.

317 Knowlton St.

Bridgeport, Conn.

When writing advertisers kindly mention having seen the advertisement in this paper.

FILTERS.

Anti-Splash Tap Fitters

The "Galvo" Filter and Water Steriliser
"Perfection" Fire Extinguishers

There's good money in them for hardware dealers.

Write for Prices.

The Anti-Splash Filter Co.

OWEN SOUND - - ONTARIO

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Representing manufacturers of high-class specialties, including "Handhook," "So-Clean," and others.

We are open at any time to receive propositions from first-class manufacturers who wish to be represented in Canada. Write at once. Best of references.

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Western Distributors, Limited
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Wholesale Commission Merchants and Manufacturers' Agents. Cars Distributed, Warehoused and Forwarded. Warehouse on Transfer Track. Business solicited.

OUR POSITION IS YOUR OPPORTUNITY
SASKATOON, WESTERN CANADA

BRONZE POWDERS

BRONZE LIQUIDS

The

Canadian Bronze Powder Works

Montreal

Toronto

Works, Valleyfield

Send us your orders and we guarantee the quality

To the Manufacturer or Wholesaler—

If it were possible to employ a traveller who could call on thousands of the best dealers all through Canada every week, what salary would you figure he'd be worth—even supposing he did nothing more than go in and shake hands with these dealers, under such circumstances they'd be glad to see him.

Would he be worth \$200, \$300 or \$500 per week? Many a house would pretty nearly let him fix his own salary.

Equip an advertisement in this paper with a verbal handshake for every dealer in Canada, and a frank, brief, pointed talk about your goods and you add a traveller to your staff who will make thousands of calls a week for you at a salary of \$4 to \$8 a week—less than you would pay a first-class stenographer.

Of course this traveller won't displace any of your regular salesmen, but he will help them to sell more goods and open up more new accounts.



RAPID WORKER

One man with a Beaver Die Stock is worth two or three men with any other Die Stock made.

"Beaver" Adjustable Die Stocks

HAVE cut the cost of pipe threading in two because they will thread all sizes of pipe without changing dies.

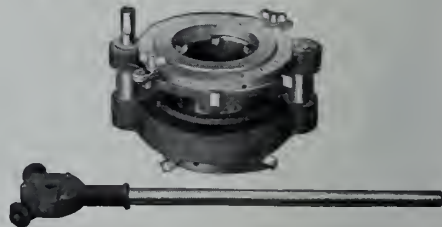
They are built on the receding principle which positively enables one man to thread any size of pipe and produce absolutely tight joints for all work, including hot water. They save the time formerly used up in changing dies and looking after loose parts, and eliminate all of thread-stripping when backing off.



No. 25A, threading 1, 1¼, 1½, 2-inch pipe.
A boy can operate it,



No. 6, threading ¼, ½, ¾, 1 inch, complet



No. 60. Uses two sets of dies. One set cuts 2½, 3, 3½ in the other cuts 4, 4½, 5, 6 in.; they are inserted without moving any parts.

No loose Bushings or loose Dies on No 25A and No 6, and they cut 1, 1¼, 1½ and 2-inch pipes.

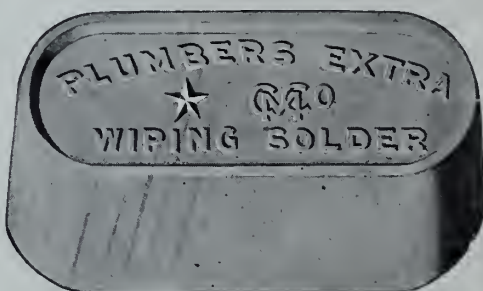
We can furnish a separate set of dies for 1, 1¼, 1½ and 2-inch pipe

Write us for Illustrated Price Lists.

BORDEN CANADIAN COMPANY,
66 Richmond Street East Toronto, Ontario

For a first class joint use **EXTRA STAR WIPING SOLDER.** It works like putty and sticks like glue.

The purest treasure
Mortal times afford:
Is Spotless Reputation.
King Richard II.



**EXTRA STAR WIPING
SOLDER**

Has a Spotless Reputation.

The Canada Metal Co., Ltd., FRASER AVE., Toronto

CAST IRON FITTINGS

Being manufacturers of Cast Iron Fittings exclusively, we are naturally in a position to give quality the first place, which accounts for the high standard maintained.



That our fittings are being recognized by the trade as a standard is proven by our largely increased sales which have made the installation of additional machinery necessary.

Standard Fitting & Valve Co., Ltd. - Guelph, Ont.

Use the Long Distance Phone

To order any supplies you may need in a special hurry.

You see, we have been a hundred years perfecting our facilities and we can give you unrivalled service. Under the name of

“SCOTIA” PLUMBING SUPPLIES

We sell all the leading lines of Plumbers' Supplies made in the world.

Big stocks always on hand—prompt shipment made—prices as low as good quality permits.

Wm. Stairs, Sons & Morrow, LIMITED

ESTABLISHED A.D. 1810

Halifax

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Nova Scotia



Economy and Safety IN THE SOVEREIGN BOILER

Years of experimenting, combined with the use of selected materials and skilled workmanship, has put the "Sovereign" Boiler in a class by itself.

By installing the "Sovereign" you give comfort to your customers at minimum coal costs.

It is an excellent line upon which to rest your reputation. It gives perfect service.

WRITE AT ONE FOR PRICES.

Taylor-Forbes Co., Ltd., GUELPH, Ontario

TORONTO: 1088 King St. W. Taylor-Forbes Co., Ltd., 246 Craig St. W. Montreal, Que. Taylor-Forbes Co., Ltd., 1070 Homer St. Vancouver, B. C. W. R. Mathers, 46 Princess St., St. John, N. B. H. R. Moulden & Son, Travellers' Bldg., Winnipeg, Man. The Mechanics Supply Company, Quebec, Que.



ASTORIA

AVOID COMPLAINTS THEY EAT UP YOUR PROFITS

It is annoying after you have finished a job, to have your telephone wire kept hot with the complaints of a dissatisfied customer. This can be prevented by using reliable fittings and supplies on every job. The Morrison Line of Plumbing Supplies are thoroughly reliable. We guarantee every article we sell to be exactly as represented.

In W.C. outfits you will find these lines to be thoroughly satisfactory.

"QUALITY"

Closet Combinations

"Elgin" Washdown

"Simplex" Syphon Jet

"Astoria" Square Back Syphon Jet

All our low-down outfits are furnished with our Patent Combined Ball Cock with Shut-off Cock. This is the simplest and most efficient on the market, with full weight copper lining.

THE
James Morrison Brass Mfg. Co.
LIMITED

Toronto

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Ontario

THE PLUMBER IS JUDGED BY HIS MATERIALS



"EMPIRE" CLOSETS

are the choice of plumbers who know, and to recommend them is to advertise your own standing in the trade.

The seat is of special construction, the tank large and the bowl well made and of good shape.

Full range of Plumbers' Supplies. Immediate shipments guaranteed.

EMPIRE MANUFACTURING CO., LTD.
LONDON, ONT.

PLUMBER & STEAMFITTER

and Sanitary Engineer of Canada

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Vol. V.

Publication Office : TORONTO, JULY 15, 1911.

No. 14

THE STANDARD

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PLATE F353

line of LAUNDRY TRAYS is the most complete made. All combinations are set up and fitted at factory before shipping. Booklet showing roughing measurement sent on request.

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PLUMBER AND STEAMFITTER

Beaver Brand

Cast Iron Enamel Ware

Noted for Good Color, Durability and Attractiveness



The above cut shows our Wall Lavatory—artistic, sanitary and durable.

One of our leading sellers. Our splendidly equipped plant is producing an unbeatable range of enameled Bath Tubs, Slop Sinks, Kitchen Sinks, Laundry Tubs, Lavatories, Closets, etc., and our customers can be sure of satisfactory goods promptly shipped. A guarantee goes with all Beaver Brand Enameled Ware.

Amherst Foundry Co., Ltd., Amherst, N.S.

ONTARIO SALES AGENT:

MONARCH BRASS MFG. CO., LTD., ¹⁷⁸⁻¹⁸⁰ Victoria Street, TORONTO

MARITIME PROVINCES
All Jobbing Houses

MONTREAL, P.Q.
All Jobbing Houses

WINNIPEG, MAN.
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VANCOUVER, B.C.
A. O. Campbell

PLUMBER AND STEAMFITTER

The Honeywell System OF HOT WATER HEATING

WAS ADOPTED IN THE YEAR 1910 IN
FORTY PER CENT.

OF TOTAL

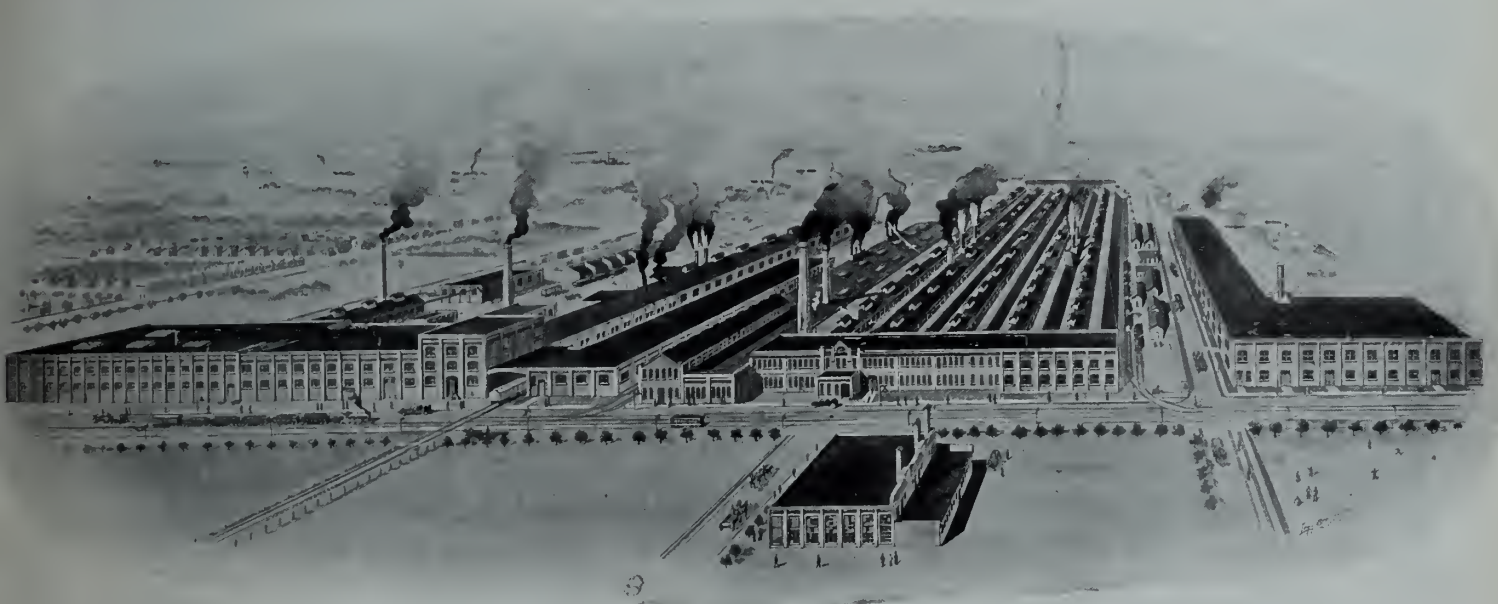
Hot Water Installations Throughout Canada

Upon no other point are Architects, Steamfitters and Proprietors so well agreed as on
the Merits of the Honeywell System.

The Honeywell Heating Specialty Company

Frank T. Rawley,
Manager for Canada

Room 1008 Eastern Townships Bank Bldg., Montreal.
Phone Main 4615



Malleable and Cast-iron-pipe Fittings

MANUFACTURED BY

FITTINGS LIMITED

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- WINNIPEG

- MONTREAL

Our 1911 Catalogue is now ready.



Plumbers and Steamfitters

Who use SebcO Expansion Bolts and Anchors in fastening fixtures are sure of a neater and more lasting job at no added cost. It stands to reason that the man who does the best job gets the preference.

Use SebcO Anchors and SebcO Expansion Bolts

Used by Plumbers for every purpose—anywhere an ordinary bolt or screw is unsafe. No leads—No plugs. An **easy, quick**, absolutely dependable means of fastening Flush Boxes, Seats, Tanks, Basins, Tubs, etc., to bathroom walls and floors. Sagging and "dipping" fixtures are as unsightly as they are dangerous.

Our new 70 page catalogue number 74 of plumbing specialties and free working samples are yours for the asking. Write!

Star Expansion Bolt Company

147-149 CEDAR STREET

NEW YORK CITY

BACON BROS., 377 St. Paul St., Montreal, Can.; TURNER & WALKER, 147 Baunatyne Ave., Winnipeg, Can.
H. F. McINTOSH & CO., 28 Toronto St., Toronto, Can.

Under Expert Examination our

BRASS GOODS

have proved to be of exceptional quality. This is because of the modern machinery and methods we employ for every process of manufacture.

WE MAKE FITTINGS FOR GAS, WATER AND STEAM

CONTRACT WORK, such as Gas Stove Cocks, all sorts of CORPORATION BRASS, etc., is our special care, also **PLUMBERS' BRASS GOODS**, etc.

We have the plant and the trained workmen to turn out the very best grade of contract supplies in any quantity that may be required.

QUALITY CONSIDERED, OUR PRICES ARE EXCEPTIONALLY LOW

OUR FULL GUARANTEE WITH EVERY PIECE

The Wallaceburg Brass and Iron Mfg. Co., Limited
Wallaceburg **Ontario**

I'M NYE THE DIE MAN



Why can I afford to talk as I do about Nye Dies?

That seems to bother a whole lot of people more than me—or than it does the NYE DIE USERS. I've got something to stand on,—to back me up—when I ask you all to

Try the Nye Die at My Risk

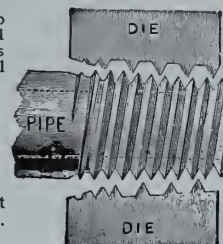
I've been long enough on earth to know better than ask a man to try a poor Die on that basis. If I had a poor Die I'd never make such an offer, as I have no desire to go broke. But as it is,—

MY DIE BACKS UP ALL I CLAIM FOR IT and that is this:—

Owing to its patented construction, it will operate with less than half the power required to operate any other similar Die: it will produce a more perfect thread than any other Die. It is made from the highest grade of tool steel obtainable in the whole world and every one is guaranteed in writing.

If my Die will do all this I know you want it and if it doesn't—you don't. And so you need not take **my word** for it—but **your own experience** with the Die—I ask you merely to try it at my risk,—to be returned at **my expense**—if my claims are other than I state, I'll guarantee you can't lose one cent and any bank will tell you I'm reliable.

Send me a trial order to-day
--Now--Right Now



and learn how much better NYE DIES are than others. You buy Dies anyway—so WHY NOT TRY THE NYE the next time—all at my risk and expense. "NYE" The Die MAN.

The Nye Tool and Machine Works, 124 N. Jefferson St., CHICAGO, ILL.



History:

For the whole world we established the high standard of Chain Tool strength and do unfailingly sustain our claim for superiority.

Your pull, our pull and "Vulcan-Bijaw's" live on same basis—if not superior it couldn't hold.

In the matter of service we've doubled up on "Vulcan-Bijaw" pull!

The double-ended reversible jaws, easily turned when teeth

first in use become dull, assure the service of two tools at the price of one.

There's a full measure of economy in "Vulcan-Bijaws."

All sizes; each size equal to four pairs common tongs. See your dealer.

A POSTAL BRINGS LITERATURE

J. H. WILLIAMS & CO.

Superior Drop-Forged
Chain Pipe Tools

77 Richards St., BROOKLYN, N.Y.

WROUGHT PIPE

BLACK and GALVANIZED. SIZES, 1/8 IN. TO 4 IN.

All our pipe thoroughly inspected, tested to 600 lbs. hydraulic pressure and branded.

Ask your jobber for



Brand

CANADIAN TUBE & IRON CO., LIMITED

Montreal

Works: Lachine Canal

Fig. I

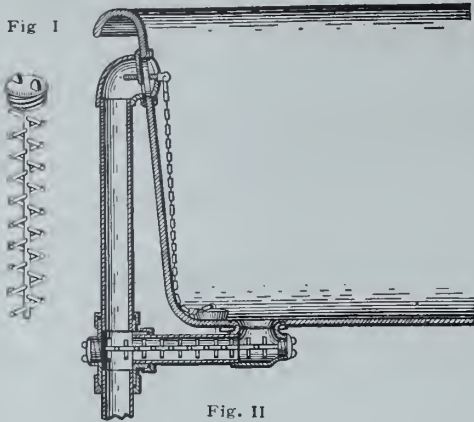


Fig. II

E.N.O. Patent Bath and Waste Overflow

SOMETHING NEW

Here is a Bath Waste and Overflow that can be thoroughly cleaned out from two outlets, viz: back of Bath or underneath. The Cleanout Rod, Fig. I, is made of aluminum, has a ball joint connection to the plug. All the fittings are of cast brass and heavily nickel plated. The whole is got up for use and will stand more abuse than any other Bath Waste in existence. Our patent can be used with any standard bath on the market.

SOLE CANADIAN MANUFACTURERS

Westport Mfg. & Plating Co., Limited
117½ BANK STREET, OTTAWA

JUST WHAT YOU'VE BEEN LOOKING FOR

Rapid
BATH HEATER

NEW MODEL "F."

This new "Rapid" Model "F" has a gas regulating device on gas valve so that gas pressure at each individual heater can be absolutely controlled. This is a new feature and guarantees perfect results. Put this new "Rapid" Model up by the side of any instantaneous bath heater on the market and watch results under any conditions.

SEND AT ONCE FOR COMPLETE CATALOG AND PRICES.

RAPID HEATER COMPANY
(INCORPORATED)
GRAND RAPIDS, MICH., U.S.A.

A NEW VALVE

JENKINS BROS.'

GUN METAL AND IRON BODY

GATE VALVES

"TYPE K"

Special Features:

Highest Quality Steam Metal. Perfect Interchangeability. Double Compensating Bronze Wedges. Metal Gland in Stuffing-Box. Great Strength of All Parts. Carefully tested to 250-lbs. Water Pressure

UNRIVALLED IN DESIGN AND WORKMANSHIP

A Thoroughly Reliable Gate Valve for Steam, Water, Oil, Gas or Air. A trial will convince you that it will pay you to use these valves on all your work.

Stamped with TRADE MARK like cut.

Stocked by Machinery, Hardware and Supply Dealers throughout the World.

Catalogue and Full Particulars Cheerfully Furnished on Application.

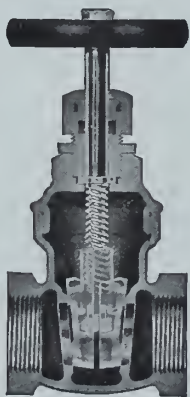
JENKINS BROS., Limited

Head Office and Works:

102 St. Remi St., Montreal, Canada

And at

95 Queen Victoria St., London, E.C.



"PEERLESS" WATER SERVICE SYSTEM

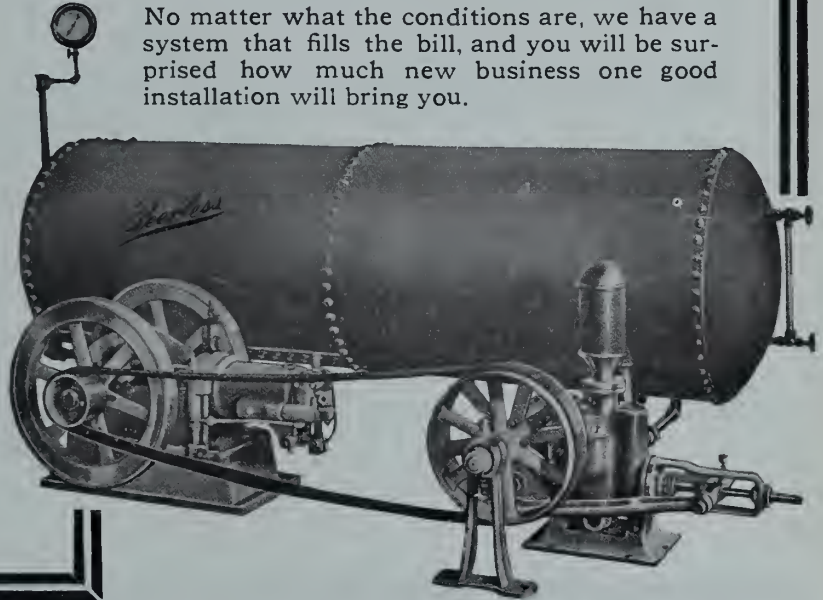
A MECHANICALLY PERFECT SYSTEM THAT BRINGS RESULTS.

You don't buy Peerless Water Systems through an agent, they come direct from a Canadian house that is ready to give you reliable advice upon each individual case, and that guarantees results every time. Do you get this? **Read it again.**

We are specialists in tank building for water, air, oils or any other purpose. **Your business is not paying as it should,** unless you are buying right, and you are not buying right unless you are buying from us.

National Equipment Co., Limited

21-27 LOMBARD STREET,
TORONTO, ONTARIO



No matter what the conditions are, we have a system that fills the bill, and you will be surprised how much new business one good installation will bring you.

The "ADANAC"

is the Newest and Best Bath Cock on the Market — the Genuine Quick Opener Lever handles but NO Fuller Balls.

"Patent Pending Design Registered"

The following points are the same as contained in OUR Quick Opening Sink Cocks.

1. FIBER WASHERS ENCASED.
2. STEMS DOUBLE PITCH THREAD.
3. RAISED SEAT (same as Compression Bibbs.)
4. SPECIAL PACKINGS (same as Compression Bibbs.)



OUR GUARANTEE

"Any article of our make, proving defective through inferior metal or improper workmanship, on our part, will be cheerfully replaced with two good ones at no charge to you."

CANADIAN BRASS CO., Limited
GALT - CANADA

Some other boilers have some of them but no other boiler has all of them.

Easily operated side-lever Shaker.

Patented grate connection—no split-pins or bolts.

Corrugated lining in Firepot.

Tapered smoke passages.

"Twice-as-big" circulation-quicken-
ing water openings.

Close fitting, smoke and gas-tight
doors.

Generous combustion chambers.



No. 3½, High Base "King" Hot Water Boiler

Your customers are learning that there's more to a boiler than cast iron.

Your prospect of to-day isn't buying on anybody's "Say so."

He wants to be "shown"—he wants actual facts about the boiler you're offering him—and you and we can't afford to overlook this in trying to do business with him. It is still true, of course, that an unprincipled salesman can muddle up a lot of his "book-learned" ideas, but if he visits three fitters, two of them are pretty likely to tell him the truth and crooked sales-talk is going to queer somebody.

That's one reason, it seems to us, why it ought to pay you to recommend the "King." Its selling points are all practical, truthful advantages—ones that are bound to appeal to any prospect, whether he is an expert in heating or just learning the a-b-c's of it.

When a man asks about the "King" Boiler, tell him candidly just what you think of it. The boiler will make good every reasonable claim you make for it—we take entire responsibility for that.

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TORONTO, JULY 15, 1911

THE sanitary trade has in the past been subjected to much ridicule at the hands of newspaper writers and comic paper artists. The plumber has been depicted as a regular hold-up man, an imposer of extortionate prices.

UNJUST ATTACK ON THE TRADE.

The impression that the general public has gained as a result is totally unjust to the members of the trade. The plumber has borne the jibes of the press with good-natured tolerance in the past, but it is possible for newspapers to go too far. Members of the trade feel that the Toronto Globe, in a recent issue, was grossly unfair in its comments, editorially, on the slum situation in Toronto. The Globe said in part:

"It is to be hoped the Board of Health will follow up Dr. Hastings' report by the necessary orders for the abolition of all outside privy pits in the older sections of the city within a period of two or three years. It is possible that this might mean a harvest for the plumbers' combine, but if there were any signs of a disposition to charge unfairly high prices the board could do as the sanitary authorities of British cities do under like conditions—select standard material, purchase it at wholesale, and engage workmen to install closets and baths at cost price. The knowledge that the board would not permit its campaign for cleanliness to be made the occasion for exaction would probably be sufficient to secure fair prices."

Why the Globe should go out of its way to attack in such terms a trade so highly important and honorable is hard to conceive. There is absolutely no basis for the harsh comments made. In the first place, no plumbers' combine exists. There is less organization among the plumbers than in other trades, and the associations which do exist are carried on purely and simply to improve conditions within the trade and not to enhance prices in any way. In the second place, the plumber—popular belief to the contrary—gets less for his work than is made in kindred lines. The profit that the plumber charges, in a large majority of cases, would look small compared to the percentage that the merchant asks for his profit.

The plumber is quite as earnest in his desire to see conditions of life improved in the slum sections of the large cities as any other citizen; more so, in fact, as he knows how deadly is the effect of the lack of sanitation in the home. The plumber has done a great deal in the

past to improve conditions and to make it possible for every home to share the benefits of modern methods of sanitation. It is, therefore, manifestly unjust to assert that the only interest the members of the trade take in a humane movement to improve slum life is in the opportunity presented to extract large profits. The Globe will find that the co-operation of the plumber will be the greatest help the movement will have and it will be given in an earnest and disinterested spirit.

IT would not be fitting to let the recent convention pass into history without one word of praise for the retiring officers. It was recognized on all hands that the men at the helm during 1910-11 had performed their duties in a highly creditable manner. President Cooper and Secretary Le Grow worked hard and unremittingly in their respective spheres, and they were ably backed up by the other officers. The tone of the reports submitted was an indication of the high standard of work done during the year.

THE RETIRING OFFICERS.

It is gratifying to note that most of the officials will serve in some official capacity during the coming twelve-month. Vice-President Walsh has been promoted to the headship of the new society, and E. J. Young, of Calgary, who has acted as vice-president of Alberta for some years, will enter on the wider duties of vice-president of the Canadian society. Secretary Le Grow will serve as vice-president for Ontario, and Treasurer Higginbottom will continue in that office.

TO how many members of the trade did the recent hot spell suggest a good opportunity for business in certain lines? The writer passed a window—not in a plumbing shop, by the way—one afternoon during the very hottest period, on one of the after-

WATCH TRADE OPPORTUNITIES.

noon when the mercury was climbing to heights usually attained in the tropics only. It contained a collection of bathroom articles, such as bath sprays, bath seats, and a shower bath. A big sign in the window read: "Get a bath spray and keep cool." Enquiry within elicited the information that a big business had been done. A large supply had practically been sold out since the beginning of the hot spell.

Special effort to meet special occasions invariably results in gains. The unusual warmth presented a splendid

opportunity for business in bathroom accessories, but how many made any effort to sell articles of that nature? Not very many. Such opportunities are arising every day, and the man who perceives them and takes advantage will find himself amply repaid.

BY WIRELESS from Port Arthur: Up to the present Jack Marshall has not yet sold the watch, but he hopes to close the deal soon.

IT is reported that collections in Ontario are not entirely satisfactory at the present time. The primary cause lies in the fact that too many men are deficient in looking after their own collections. Accustomed to wait themselves, they make the manufacturer and supply man wait in turn. That this is the root of the whole trouble is established by the fact that it is the same men, year after year, who fall behind. The paper turned back is generally decorated with familiar names. These men are chronically slow in meeting financial obligations and it is doubtful if they will ever get their business on a basis where they will not have to slave and scrape to meet notes.

Here is an incident which explains why some men never get their heads above water. A Toronto supply man incurred a small bill with one of his own customers. Some weeks passed and no bill was presented. Finally, the wholesaler happened to meet his creditor. "I have not received a bill yet," he reminded the latter. "Don't treat me any different from any other customer; send in your bill and I'll send you a cheque." "I am not treating you any different," was the reply. "Didn't know you owed me anything. You see, I haven't time to bother much with the books, so a man comes in twice a year and fixes them up for me. He looks after the accounts." This may sound incredible to men who run their affairs on a business basis. The wholesaler was hardly inclined to believe that anyone could be so slack, but sure enough, it was not until five months after that the bill arrived.

Is it any wonder that some men fail to make a success of business? It is impossible to get along and prosper if collections are not made promptly and thoroughly. Furthermore, the man who neglects to go after the money due him will find it exceedingly difficult to make payments on his own indebtedness.

PLUMBING ordinances are as many and as varied as the discordant tongues spoken at the Tower of Babel. It is time that something was done to create a national standard.

QUITE A FEW are looking forward to that Calgary trip already.

HERE'S a man who sends out bills twice a year. He complains that people are "slow pay." Whose fault is it?

IF NOT supplied regularly with food, the body soon gives out. How long a tenure of life would you give a business conducted on the bi-yearly collection basis?

Our Visitors



Away up St. Lawrence St., in Montreal, there is a large building on which is emblazoned in gilt letters, the name "Lariviere Incorporee." It is one of the finest equipped and most ably managed hardware and plumbing establishments in all Canada, and the moving spirit behind the business is Fred C. Lariviere, whom our artist has caught in the act of sharing profits with his employees.

There are two things that Mr. Lariviere stands for pre-eminently. One of them, as the reader will already have guessed is Profit Sharing, and the other is System. In the Lariviere store, they go hand-in-hand. Without the perfect system which covers the smallest details of the business, Mr. Lariviere would not be able to work the profit-sharing plan on the scientific basis that characterizes it at present.

Mr. Lariviere is a big man both physically and mentally. Standing six feet in height and built in proportion, he has been a commanding figure at every convention of the Ontario Hardware Association, of which he is an honorary member. He is, this year, President of the Montreal Chambre de Commerce, the French-Canadian Board of Trade, and is recognized by his compatriots as one of their most successful and progressive business men.

There is an office on University Ave. where you will always receive a hearty welcome when you are in Toronto, Mr. Lariviere. The writer takes this opportunity of acknowledging the many inspirations for editorials and special articles that you have given him, when he was hard pressed for ideas.

THE ESTIMATE sheet adopted in Toronto is broad enough to cover any size contract. No chance to forget anything with it handy.

Officers are Following Up Plans of the National

What Steps Should be Taken to Effect the Change in Name?—Suggestions Are Solicited—Work Has Been Started in Ontario—The True Meaning of Term "Sanitary Engineer."

THE executive officers at Montreal have started to work, and steps will be taken to carry out the movements inaugurated at the recent convention. So far as is known, no steps have yet been taken with reference to the appointment of a salaried official to assist Secretary Watson. The matter was left in the hands of the officers with power to act, and the appointment, when the time is considered ripe.

One clause in the report of the select committee read:

"In the matter of conducting a plumbing business, we would recommend that every effort be made by the national, as well as the provincial associations to educate the trade generally on the cost of conducting business. It is a well-known fact that the average plumber is in the habit of overlooking his overhead expense in making up his estimate."



When East met West—A group of delegates from all parts of Canada, taken at the convention.

that it is time the trade generally acquired a better knowledge of accurate figuring. As the columns of Plumber and Steamfitter offer the best medium for an educative campaign of this nature, communications bearing on this important subject will be gladly received and published. A number of ar-

ties bearing on overhead expense have in the past appeared in this paper, and more will be published in the near future.

The Heating Committee.

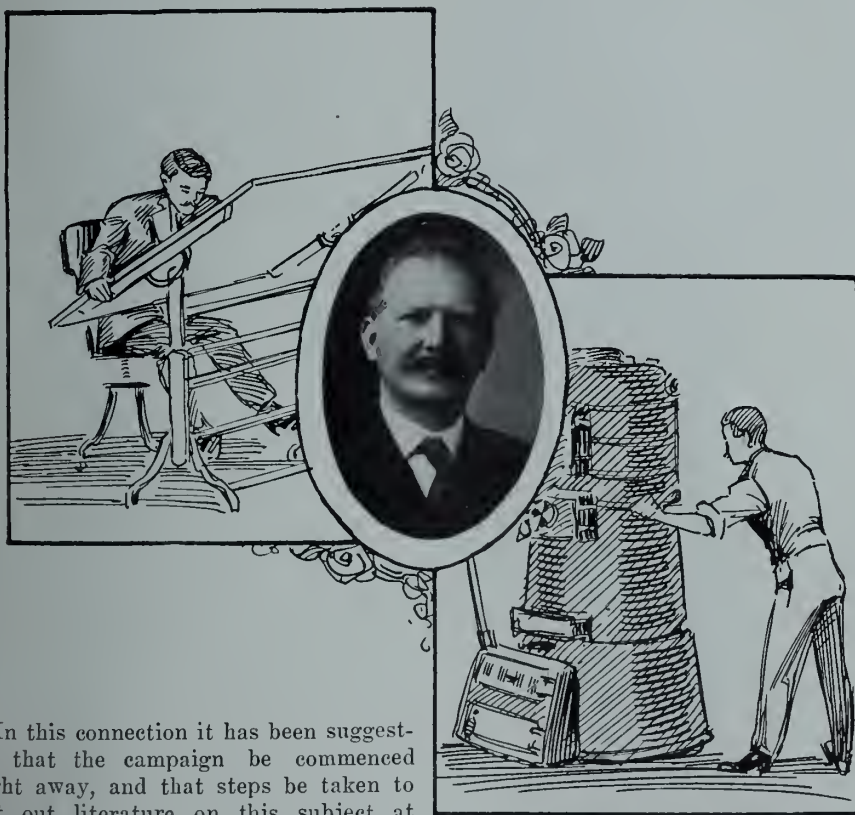
One new committee was launched at the convention which will look after heating and ventilating work. R. J. Priestly, of Calgary, is the chairman, and as he has made a close study of heating conditions he will be in a position to do considerable good work during the coming year. The most important question pending has to do with the drafting of proper specification forms. It is probable that before another year rolls around advisory committees to deal with the problem will be formed in every province.

The Change of Name.

Discussion is still heard on all hands with reference to the change in name to the Canadian Society of Sanitary and Heating Engineers. How this change is to be effected has become, therefore, one of the most important questions before the trade. Should each individual member begin by changing the name on his sign board, his letter heads and in his advertising?

Now that the National body has seen fit to adopt a new name, steps should be taken to see that the change is generally recognized, and that it comes into public use as soon as possible. Communications on this score are solicited.

In this connection, it is interesting to note that "Domestic Engineering" recently offered a prize for the best definition of the term "sanitary engineer."



In this connection it has been suggested that the campaign be commenced right away, and that steps be taken to get out literature on this subject at once, for distribution to all members. This suggestion emanates from an Ontario member, who expresses the opinion

R. J. Priestly, chairman of the committee appointed to look after heating work and specifications.

The Prize-Winning Answer.

What is a Sanitary Engineer? To completely define the expression "Sanitary Engineer," it is desirable to begin with the definitions given by Sedgwick: "Sanitary science is that body of sanitary knowledge which, having been sufficiently and critically examined, has been found so far as tested invariably true. Its phenomena are natural phenomena, its laws are natural laws, its principles are scientific principles."

"The sanitary arts are those methods and processes by which the applications of the principles of sanitary science are effected."

With these statements in mind we may define a Sanitary Engineer as one who, having acquired a broad knowledge of the phenomena, laws and principles of sanitary science, has, by practical experience in the art of constructing sanitary works or operating sanitary processes, become qualified to design important sanitary works or to materially improve sanitary methods and procedures.

Chas. B. Ball,
Chicago. Chief Sanitary Inspector.

Another answer, excellent and terse, read as follows:

Permit me to answer the question: "What is a Sanitary Engineer?" I will do it in as few words as possible: "The doctor's and the undertaker's enemy."

Chicago. A. Plumber.



"Joe" Barnes and his magnet. He was largely responsible for the splendid attendance at the convention.

Standardization of Ordinances.

Another question which will be to the fore during the coming year is the standardization of ordinances in Canada. This is a big problem. There is a crying need felt for a more uniform adaptation of plumbing regulations, and the remedy lies in concerted action.

It is suggested that the problem be threshed out in the local associations, and that it be made a leading topic at all gatherings held for the purpose of organizing provincial bodies.

The Work in Ontario.

The work in Ontario is progressing well.

A local association has been formed at London, with John Eggett, treasurer of the Ontario Society, as president, and E. H. Russell secretary. Good work has been done to date in other sections.

Building Notes.

Tenders are being called for the new Masonic Temple at London.

A \$15,000 synagogue is to be erected on King Edward Avenue, Ottawa.

Ratepayers of Saskatoon are to vote on a by-law to raise \$95,000 for public buildings.

A new \$40,000 school is to be erected at South Vancouver.

Plans are being prepared for a new rink at Vancouver, to cost \$25,000.



How long before this change will be made in every establishment?

SEND IN PROBLEMS.

The "Question Box" is one of the most valuable features in Plumber and Steamfitter. It can be rendered still more useful if subscribers will send in problems, which they desired solved, or which they have themselves solved. The editor of this department is always willing to give any information that may be desired or to lend his assistance in finding a solution for any knotty trade problem. If possible send in drawings with each problem submitted.

Slum Improvement Question Now to the Fore

Toronto Medical Health Officer Submits Report Showing Deplorable Conditions in Thousands of Homes—Utter Lack of Sanitary Arrangements Shown—Movement Started to Reform Evils.

TORONTO, July 5.—The report of Dr. Hastings on the slum situation has been presented to the local board of health. It contains statements of a startling nature, with figures to prove the deplorable conditions which prevail in the slum sections, particularly in "the ward."

Dr. Hastings' report was a most comprehensive one, covering all phases of the situation. It dealt with the insanitary conditions in the houses, the lack of drainage, the existence of insanitary privy pits, the overcrowding of houses and rooms, the inadequacy of the water supply, the unwholesome darkness of houses and many other evils of a like nature.

In all 4,696 houses were inspected, all of them practically lying south of College and Carlton Streets. The staff employed by Dr. Hastings found there 357 families living in filthy environment, 45 of them being affected with tuberculosis. Of the 4,696 houses inspected only 1,601 had baths in the houses, and only 4,034 had drains in the houses. Overcrowded rooms were found in 109 houses, dark or sunless rooms in 18 and 390 houses were reported, for various reasons, as "absolutely unfit for habitation."

Privy Pits Found.

It was found that in 2,207 cases privy pits were used and 2,251 closets were found right in the houses. Insanitary closets were found in 716 cases.

Ninety-two tenement houses were included in the list, and forty-one common lodging-houses, three cellar dwellings and twelve basement dwellings. Of four-roomed dwellings there were 408, three-roomed 646, two-roomed 411, while of one-roomed dwellings there were 198, and in these latter were found living 472 persons. There 247 rear houses. Two thousand one hundred and thirty-seven houses were listed containing two families each. The number of water taps found inside the houses were 4,823, while 519 were outside. The total number of persons in the places inspected was 26,413.

The classification of families according to nationalities showed the following: French, 44; German, 43; Italian, 195; Hebrew (English-speaking), 1,267; Polish, 75; Russian, 45; Swedish, 2; Finnish, 2; Macedonian, 51; Greek, 25; Servian, 2; Roumanian, 3; Chinese, 13; colored, 21.

The publication of the report has aroused widespread interest. The authorities, and the public generally, have begun to realize that something must be done to improve the conditions existant in the crowded slum sections, not only to mitigate the hardships endured by the unhappy denizens but to check the rapid spread of the slums.

The Nettleford copartnership plan is deemed feasible by Dr. Hastings, in solving the housing question. His sugges-

speak with pride of Toronto the Beautiful and Toronto the Good. No city can be in any real sense beautiful or good in which many thousands of people live without the most vitally important requirements for health and morality."

Better Sanitary Arrangements.

It is practically certain that some steps will be taken to enforce the installation of better sanitary appliances. A strong effort will be made to pass legis-



Scenes in the slum district of Toronto.—A portion of a courtyard in which over 40 people live. (Note outside privies.)—Children playing in a slum lane.

tion is that a committee be formed composed of representatives of the Board of Health and the Board of Control, to confer with representatives of organizations and public-spirited citizens, who would jointly act in appointing a permanent committee to deal with the problem of the slums. A special meeting of the Board of Health will be called shortly to consider the report and suggestions.

Disgrace to Civilization.

To show the depth of the feeling that has been stirred up, a Toronto morning paper says, editorially:

"Toronto should make short work of her slums. They are a disgrace to the city and to Canadian civilization. These facts and many others secured by the inspectors on their rounds must disturb the self-complacency of the citizens who

lation doing away with all outside privies and compelling landlords to put all houses in tenable condition.

General Buildings.

M. K. Halloran, Brantford, is to build apartments, costing \$5,000.

The Cockshutt Plow Co., Brantford, is to build a \$40,000 extension.

D'Arcy McGee, Ottawa, is to build a \$15,000 residence on Marlborough Ave.

A factory warehouse, to cost \$18,000, is to be built by the Massey-Harris Co. at Brantford.

Mayor Beattie and Ald. Saunders contemplate the erection of a paving plant at London, and are investigating the plants at Toronto and Hamilton.



The Question Box



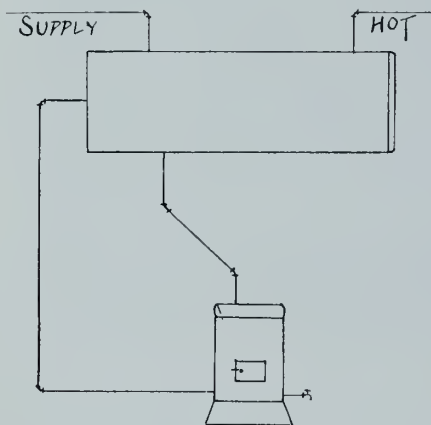
Subscribers are Urged to Send Questions to be Answered, or to Comment on Letters Published. Descriptions of Jobs Done or Shop Kinks are Also Invited.

Storage Tank Question.

Editor Plumber and Steamfitter:—In the second figure of the storage tank that you have given, what should be the size of the cold water tube, and should it have a hole punched in it, similar to the hole in the tube in a tube likewise placed in a vertical range boiler?

London, Ont., June 26. G. Z. J.

We would advise a vacuum valve rather than a hole punched in the afore-said pipe. To our mind, the pipe mentioned should be same in size as the rest. The practice of running three-quarter



supply pipe to boiler, and then bushing same to one-half for the drop tube seems foolish, for you have practically then cut down the means of inlet to the job to just what water would pass through the half inch pipe.—D. C. H.

Information Regarding Pipe Cutters.

Editor Plumber and Steamfitter:—What is the easiest and most effective means of getting rid of the rim that a three wheel pipe cutter raises when the pipe is cut?

F. B. C.

Quebec, July 5.

Buy a pipe cutter that does not raise the rim. There are such upon the market. However, so be it that you desire to cling to your present outfit, the bur can be removed in three ways. First, by hammering it down; second by using

a cold chisel; third by rasping down rim by means of a coarse file.

The first method hardens the pipe; the second takes too much time; while the third will probably answer best of all in the long run of work.—D. C. H.

WATER IN CELLAR—HOW REMOVED.

Editor Plumber and Steamfitter:—A customer of mine has a cellar in which every spring and fall, and perhaps, also, as the result of an unusually heavy shower, floods collect. What means can I take to cure this evil and be sure that the cure is effective?

G. I. V.

Montreal, July 7.

If the cellar has been cemented and supposedly drained probably the best thing to do would be to put in what is called an automatic cellar drainer. It is not all difficult to install, will work with either steam or waterworks pressure and will throw the water out of the cellar to a dead sure certainty. If you wish the name of this appliance, write us.—D. C. H.

WHERE EARTHENWARE PIPE IS BETTER.

Editor Plumber and Steamfitter:—I have seen it stated that, in certain cases, earthenware soil pipe was better than iron pipe. Can you give me the cases, or at least some of them?

F. C.

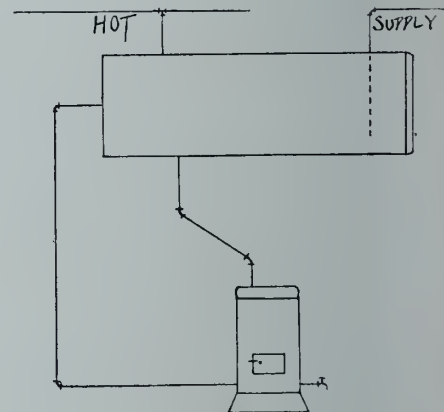
Vancouver, June 21.

We find it stated that in cases where the drain is from plating works, soda works or works where acids are used, the iron pipe does not hold out, and is liable to be eaten out in places or streaks. In such manufactories, the drain should be of earthenware pipes.—D. C. H.

ANOTHER CHANCE FOR THE PLUMBER.

Editor Plumber and Steamfitter:—While plumbing is extremely necessary and steam and hot water heating highly desirable at certain seasons of the year,

what about cooling the air in dwellings, stores, blocks and manufactories? Who among the craft is competent to install a first-class air cooling apparatus. From a look at the death records of the large cities during a hot wave, it would seem that such apparatus was needed and that here was a chance where the plumber with a moderate amount of practical foresight could "butt" into a game where considerable and profitable new business would come to him in the course of time, for there exists such ap-



paratus, only the craft, as a whole, seems mostly ignorant of the fact.

Yours truly

JOHN ROE.

Alleges Discrimination.

H. Maslin, of the Central Heating and Plumbing Co., Calgary, has laid a complaint that there is a combine among the master plumbers of that city to restrict trade. He alleges his goods are quoted at a much higher rate than those given the members of the Master Plumbers' Association, and, in some cases, he says, they are as much as 20 per cent. higher.

E. J. Young, president of the association, described the defence as being to the effect that after Maslin's first attempt in business here the wholesale people did not care to deal with him, and that this might account for the high price that might have been quoted in his particular case.

Sanitary Trade is Rapidly Growing in Importance

Members Should Keep Up With the Times by Improving Their Business Premises and Adopting Better Methods—Examples Quoted—The Rapid Expansion of a Western Man's Business.

THE sanitary and heating business has made wonderful strides of late years. It can truly be said that it is now on a much higher plane than formerly. The work has broadened, has taken on a deeper significance in its bearing on the problem of public health. The installation of sanitary appliances now calls for a wide knowledge of fundamental scientific principles, in addition to a high degree of practical skill.

The growing recognition of the increased importance of the trade culminated in the change in name effected at the recent convention of the National Association of Master Plumbers of Canada. Under their new name—the Canadian Society of Sanitary and Heating Engineers—the members will continue to work towards the betterment of conditions within the trade.

It is unfortunately true, however, that a good many plumbers are still content to do business on a scale quite out of keeping with the position now occupied by the trade. They have failed to advance with the times. They are content to do business in back offices, or lean-to shanties. Their premises are filled with a miscellaneous collection of odds and ends, with absolutely no attempt at order or display. While some men are able to work up a tolerably good business in this way, the fact remains that they are limiting their prospects for the future. The man who judges his business to be worth nothing better in the way of premises than a dingy little shop

is certain to find that the public will accept him at his own valuation.

The change in the name of the trade will come gradually. Other changes will have to be effected at the same time and among them will be the improvement of methods, so necessary in many cases. Neater and more attractive stores and improved business management will prove the best foundation on which to work.

There has been a marked tendency of late years toward the establishment of creditable plumbing shops, with handsome showrooms and attractive windows.



The former premises of E. J. Young, Calgary.

The writer had occasion recently to visit a shop in a small Canadian city. To say that he was surprised at the almost lavish decorations of the store front and the elaborate arrangement of the showroom, would be putting it mildly. The front of the store contained a splendid assortment of plumbing, heating and lighting goods, and along one side were a series of model bathrooms, fitted out in complete and handsome style. The whole establishment was neat and at-

tractive in the extreme. It was quite apparent that the sum spent in fitting up the place would serve to buy many a plumbing establishment, lock, stock and barrel.

"Has it paid?" the proprietor was asked.

The proprietor smiled. "You bet," he said. "It cost a lot, but the quality of my business connection has improved wonderfully since I opened up here. I do very little competitive work now. Many of the best people in town come here and give me their work with one stipulation only—best material and workmanship demanded."

The Shop Window.

Many members of the trade have failed to grasp the importance of the store window as a means of drawing business. The window now bears practically the same relation to the store and the business as the face bears to the human being. People are judged by their faces. An open countenance is deemed evidence of a bright and intelligent mind; the dull and repellant countenance is considered to reflect a like condition within and the possessor is generally shunned on that account. It is getting to be largely the same with the store window. A bright, attractive or original window is accepted as a guarantee that like conditions prevail within the shop. A slipshod, poorly-arranged and common-place window is likewise felt to reflect the style of store and the methods of the proprietor; and the people pass by with-



The new store of E. J. Young, Calgary, and some of his staff.

out paying the tribute of a second glance.

This applies to the plumbing business, as well as to all retail trades. An attractive shop window will draw trade, where a poorly-arranged and dusty one will deter customers from entering.

A Rapid Expansion.

No better example of the rapidity with which a properly conducted business grows can be secured than that afforded by the experience of E. J. Young, of Calgary. For some years Mr. Young occupied the premises shown in the small illustration. His business grew so rapidly that he recently built a new commercial block of buildings and moved into the ground floor. As will be seen in the

accompanying picture, Mr. Young has a thoroughly up-to-date place with a large and spacious showroom and a handsome store front. The army in front is made up of some of his employees. There were a number not present when the photograph was taken; in all, Mr. Young employs over seventy men. In the picture the proprietor is seated on the 1st in the front seat of the first automobile.

It will be seen that Mr. Young's business growth has evidenced itself in other ways besides the change in quarters and the enlargement of his staff. In the first picture one automobile is shown. Now he has two, in addition to several rigs. Truly, in the west events march forward with giant strides.

BUSINESS IN FINISHED STEEL INCREASING.

New York, July 6, 1911.—The Iron Age says to-day: Very complete reports from blast furnace operators to The Iron Age show an output in June of 1,787,566 gross tons of coke and anthracite pig iron in the United States against 1,893,456 tons in May. The falling off was but 105,890 tons, although the month was a day shorter. The daily output in June was 59,585 tons, which is 1,494 tons under the daily rate in May. This is the lowest production of any month since January, when the daily output was 56,752 tons. The furnaces in blast July 1 numbered 197 against 203 in blast June 1, and their estimated daily capacity was 59,979 tons against 61,844 tons June 1. The decline in the June output was confined to the merchant furnaces. Those connected with steel plants maintained a daily rate of 42,791 tons against 42,270 tons in May. These figures substantiate the reports of an improvement in the steel trade in June and it is expected that the July figures will show this tendency more strongly. The June figures added to those for previous months make an aggregate of 11,470,054 tons of coke and anthracite pig iron produced in the first half of the year. Adding an estimate of 160,000 tons for the charcoal pig iron made, the total for the half year is 11,630,054 against 12,319,807 tons produced in the last half of 1910, according to the authentic statistics of the American Iron and Steel Association. The decline was thus a little over 5 per cent.

The indications for the coming half year are much more cheerful than those of last January. While the production of pig iron has been declining the volume of business in finished products as well as in pig iron has been increasing. The United States Steel Corporation worked up to 73 per cent. of its total steel ingot capacity last week, which represents about what is expected to be realized after the passage of the dullness of the first half of July due to stoppages for repairs and inventories. The past week witnessed the closing of another large contract for steel bars by a Western agricultural implement manufacturer. Several smaller contracts of the same character were placed in Ohio. The steel bar market seems firmly anchored on the 1.25c. Pittsburg basis. The closing of the New York Subway contract with the Brooklyn Rapid Transit Company means the early placing of contracts which will eventually require over 200,000 tons of steel. While deliveries will be spread over several years, the amount required each year will be of much importance to the steel trade. The city of Detroit will open bids July 11 on 11,000 tons of cast iron pipe.

The Education of the Plumber

THE following paper was presented at the recent convention of the American National Convention by B. Joseph O'Donnell, of Syracuse, N.Y.:

I fancy I see the smile, and hear the jibe—there is no such thing—but there you are mistaken. The plumber—that is, the master plumber—is an educated man, but the manner in which he received it will have a large influence on the way he will apply it. The average master plumber is a graduate from the ranks of the journeyman, generally a good mechanic, one who is possessed of some ambition and with ideas of his own. He thinks he knows nearly all there is to the trade, and as for business, that will take care of itself.

This chap has much to learn. The kindergarten for him. He opens up a shop, and has unlimited faith in himself, and the kindness of heart, on the part of his prospective customers, some of whom he did work for under his old boss. Here is where the plumber makes his first mistake. Instead of asking or taking the advice of older men in the trade, he generally thinks he can do it alone. Poor fellow—Education to him will mean many hard knocks. Right here, you will ask, where will he get the information that we call education? From his competitors, from the men who have spent years at the trade, and whom better experience has taught the ups and downs of business life, and who are willing to impart to the beginner that which has cost them years of their time, and much outlay of money.

Let the master plumber, who is now in the game, join with the local association, take part in its deliberations, not keeping his mouth shut when affairs are being discussed and nursing a 'grouch' because he differs with the speaker; let

him go to the meetings of the State association and see a wider circle drawn outside our affairs, and then come here to our national convention and see how small an individual he is in the great work we have before us. It's the only way.

Then there is another master plumber—the man who comes from the office—and you all know him, and what has been said about him: "Why, he couldn't wipe a joint to save his soul!" But look out for him. While you and I are trying to put a nice finish on our work, he has been studying the proposition as a merchant, and the first you know he has you "done to a finish." Get him and teach him that fraternity plays an important part in our affairs, and learn from him that which he knows.

There is another fellow who gets into the trade, that is neither useful nor ornamental—the man who is in it simply as a means to an end—a man who looks at everything from a mercenary standpoint—one who neither works with, nor cares for the ideals of our profession. Get him in, and, by the force of good example, make a master plumber of him that will be worthy of the name that we are so proud of.

Take, then, every means to improve ourselves, and those whose labors lie in the same channels, that we may become more competent in our trade, that we may receive that which trade, that we may receive that which is our due, and that we may give to our patrons that which will cause them to say "that life is made more enjoyable because of us." Study the work of our own great association, and its best friend, practically its right hand, the trade press, and we will have an education.

Official Estimate Sheet is Adopted

Toronto Committee Prepares Book and Issues it at Nominal Price of One Dollar—It is Found Handy for Reference Purposes.

AFTER a careful study of estimate sheets used in other places, a special committee appointed by the Toronto association have drafted up a sheet for the use of the members of the association. A copy of the perfected draft is shown below and it will be seen that the sheet contains a most complete list of the different materials required in sanitary work. It was designed to cover all kinds of work, and in this object the committee succeeded admirably.

Books containing a large number of sheets have been issued to the members at one dollar, this price barely covering the cost of the printing. A great many have already started to use the sheets and have found them extremely useful.

"It is rather tedious wading through the list when figuring on a small job,"

declared one man, "but I am doing it right along. I have been able to figure more accurately than ever before. I haven't lost a cent through forgetfulness in figuring since the book arrived."

Kept for Reference.

One of the best features of the estimate book is the fact that the user need not tear out any of the sheets which he has used. By leaving them in the book he keeps an accurate record of all his past contract work. The figures will always remain for reference and comparison and for use in case of dispute.

It is often a great help to be able to refer back to the figures quoted on past work. One member suggests that it would be wise to put a note at the end of each sheet, after the work has been done, stating the financial results. By doing this it would be possible to ascer-

tain what mistakes had been made in the past and to avoid figuring on the same incorrect basis.

The committee who prepared the sheet consisted of Frank Maxwell, John Wright, Dan Glynn, Tom Maxwell, Lewis Le Grow, Geo. Cooper, R. J. Shannon, J. Needham, G. F. Frankland.

NEW PLUMBING BY-LAW

Vancouver, June 26.—A new plumbing by-law is projected in this city. The plumbing committee appointed from the building commission, which is at present working on a new building by-law for the city, held a meeting recently and went into the question fully. Radical amendments to the present plumbing regulations were decided upon, virtually creating a new by-law for submission to the city council. The change was made for the purpose of meeting modern requirements for large buildings and to include the new plumbing systems which have come into use since the present by-law was framed some three years ago.

Toronto, Ont., 19

No 901

Owner

Architect

Location

PERMIT No.	AMOUNT	Price	AMOUNT BROUGHT FORWARD	Price	AMOUNT	Price	AMOUNT BROUGHT FORWARD
private drain	8 in. Ex. H. traps						3 in. gal. Elts
cutting up asphalt or cement	6 in. Ex. H. traps						2 1/2 in. gal. Elts
relaying asphalt or cement	5 in. Ex. H. traps						2 in. gal. Elts
drain	4 in. Ex. H. traps or med.						1 1/2 in. gal. Elts
drain	3 in. Ex. H. traps or med.						1 in. gal. Elts
drain	2 in. Ex. H. traps or med.						service street
drain	4 in. Ex. H. traps or med.						ft. 2 in. gal. pipe and nipples
drain	3 in. Ex. H. traps or med.						ft. 2 1/2 in. gal. pipe and nipples
drain	4 in. Ex. H. traps or med.						ft. 1 1/2 in. gal. pipe and nipples
drain	3 in. Ex. H. traps or med.						ft. 1 in. gal. pipe and nipples
drain	4 in. Ex. H. traps or med.						ft. gal. pipe and nipples
drain	3 in. Ex. H. traps or med.						ft. 1/2 in. gal. pipe and nipples
drain	4 in. Ex. H. traps or med.						ft. 1/4 in. gal. pipe and nipples
drain	3 in. Ex. H. traps or med.						2 in. gal. Ts
drain	4 in. Ex. H. traps or med.						1 1/2 in. gal. Ts
drain	3 in. Ex. H. traps or med.						1 in. gal. Ts
drain	4 in. Ex. H. traps or med.						3/4 in. gal. Ts
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drain	3 in. Ex. H. traps or med.						1/8388608 in. gal. Ts
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drain	4 in. Ex. H. traps or med.						1/4835703278458516698824704 in. gal. Ts
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drain	4 in. Ex. H. traps or med.						1/81129638414606681695789006454 in. gal. Ts
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drain	4 in. Ex. H. traps or med.						1/51922968585348276285304960411 in. gal. Ts
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drain	4 in. Ex. H. traps or med.						1/20769187434139310514121984164 in. gal. Ts
drain	3 in. Ex. H. traps or med.						1/41538374868278621028243968328 in. gal. Ts
drain	4 in. Ex. H. traps or med.						1/83076749736557242056487936657 in. gal. Ts
drain	3 in. Ex. H. traps or med.						1/16615349947311448411297587311 in. gal. Ts
drain	4 in. Ex. H. traps or med.						1/33230699894622896822595174623 in. gal. Ts
drain	3 in. Ex. H. traps or med.						1/66461399789245793645190349246 in. gal. Ts
drain	4 in. Ex. H. traps or med.						1/13292279957849158729038069849 in. gal. Ts
drain	3 in. Ex. H. traps or med.						1/26584559915698317458076139698 in. gal. Ts
drain	4 in. Ex. H. traps or med.						1/53169119831396634916152279396 in. gal. Ts
drain	3 in. Ex. H. traps or med.						1/10633823966279326983230455879 in. gal. Ts
drain	4 in. Ex. H. traps or med.						1/21267647932558653966460911758 in. gal. Ts
drain	3 in. Ex. H. traps or med.						1/42535295865117307932921823517 in. gal. Ts
drain	4 in. Ex. H. traps or med.						1/85070591730234615865843647 in. gal. Ts
drain	3 in. Ex. H. traps or med.						1/171141183460469237717687294 in. gal. Ts
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drain	4 in. Ex. H. traps or med.						1/1369129467683753901741498352 in. gal. Ts
drain	3 in. Ex. H. traps or med.						1/2738258935367507803482996704 in. gal. Ts
drain	4 in. Ex. H. traps or med.						1/5476517870735015606965993408 in. gal. Ts
drain	3 in. Ex. H. traps or med.						1/10953035741470031213931986816 in. gal. Ts
drain	4 in. Ex. H. traps or med.						1/21906071482940062427863973632 in. gal. Ts
drain	3 in. Ex. H. traps or med.						1/43812142965880124855727947264 in. gal. Ts
drain	4 in. Ex. H. traps or med.						1/87624285931760249711455894528 in. gal. Ts
drain	3 in. Ex. H. traps or med.						

Progressive Methods Used in Managing Business

Toronto Man Has Collection System for Job Work Which Has Brought Splendid Results—Money is Collected as Soon as Work is Done—Other Forms Used in Checking Material.

OF late years the necessity for a good business system in running a sanitary and heating business has been recognized more fully than in the "good old days" of the trade. It is now seen that the failure of so many to make even a decent living out of the business has been due to leakages, caused by slipshod methods. To conduct a sanitary business with a full measure of success, it is necessary to keep close tab on all material and time, to prevent waste through carelessness, and to collect promptly.

At the same time the plumber—or, to speak correctly, the sanitary and heating engineer—is so busy that he cannot give the time necessary to carry on a complex or intricate system of shop management. There is so much bustle and rush about the plumbing business that it would be impossible to conform regularly to a set of regulations requiring a great deal of time and care.

Recognizing the necessity for proper system and also the restrictions imposed by the lack of time, a number of ideas have been evolved by various men in the trade, which sufficiently control the business without taking up too much time. A good system is used by R. J. Shannon, Queen street west, Toronto. He has found that best results can be obtained from the various forms he has adopted and, with reference to collections particularly, his methods are proving highly successful.

Checking Job Work.

An order blank, as shown in the accompanying illustration, is used for all job work. These blanks are issued to the men when they start out, and they serve, therefore, in the nature of instruction slips as well. After completing the job, the workman fills in the blank, giving full particulars as to the nature of the work, the material used and the time consumed. If the work has not been paid for, the bill is made out from this slip.

These order blanks are then filed and kept. Mr. Shannon has all the order blanks used for years back and, if necessary, he could trace back and find what each one of his men had done every day of that time. By keeping these records intact, he has valuable information in his possession in case of disputes. By turning up the order blank, he is able to show just what material and what time were used on each job, and to thus confute the state-

ments urged by people desirous of skipping payment.

Quick Payment on Plan.

Every plumber at some time or other has bemoaned the difficulty experienced in collecting jobbing accounts. The amounts are generally small and people, therefore, do not bother about paying them up with any degree of promptitude. Often they forget them altogether. Mr. Shannon has a system which does away with all trouble on that score. Before starting out on jobbing work, the journeyman is handed a "work slip," a copy of which is herewith reproduced. After completing the work, he fills in the time and material, totals it up and asks the master or mistress of the house to sign in the blank space at the bottom. When the signature is obtained, the workman politely inquires if they desire to pay then. In a majority of cases, payment is made on the spot and thus much

subsequent trouble is saved. In any case, the signature has been secured, and this is useful in case of later disputes. Sometimes a householder will complain, on receiving a bill for work done, that it is not correct. The work slip, with the appended signature, is then produced and the fact established that the bill is quite correct.

"This system of ours saves a lot of time, expense and trouble," explains Mr. Shannon. "We get most of our jobbing accounts paid up as we go along. The men are all good collectors and it is very infrequent that they make an error in calculating the amount due."

To digress, an instance might be quoted here to show the trouble and expense frequently involved in making old collections. A certain master plumber found an account on his books for the sum of \$1.46. He sent out a bill for the amount. No response. His bookkeeper called on the party. No satis-

WORK SLIP

Phone Park 243

1233 QUEEN ST. WEST,

Toronto, ...191

Dr. to

R. SHANNON, Plumber

We shall esteem it a favor if all small jobbing accounts were paid directly to the workman on completion of the job.

Signature.....

Workman.....

NOTE.—In case of dispute please present this slip when paying account.

Blank used for collection after work is done.

faction was obtained. The proprietor himself made a call. No results. The calls were repeated. Still the \$1.46 remained uncollected.

The proprietor did a little figuring and discovered that the time spent in trying after that \$1.46 represented

ORDER BLANK

DATE RECEIVED.....DATE COMPLETED.....

R. J. SHANNON, Plumber

1233 QUEEN STREET WEST, TORONTO. Phone Park 243

FOR

ADDRESS

WORK TO BE DONE

MATERIAL USED

TIME

Order blank issued to each workman before starting out.

\$2.25 in cash. But he did not give in. "They've got my mad up," he declares. "I'll collect that money if I have to call every day for a year." He is still calling.

Checking Up Material.

To check up all material used, Mr. Shannon has adopted a system, the idea for which he secured from Plumber and Steamfitter. It is working very satisfactorily.

Moral: Read Plumber and Steamfitter through carefully and don't be afraid to adopt ideas that you see there.

Before going out of the shop, the workmen made out requisition sheets with a list of what they require. The sheets are signed and deposited with the stock-keeper. If anything further is needed during the day, the workman telephones in for what he wants and it is sent out to him, the additional material being added to the slip.

All material returned is duly credited and the rest is charged to the job for which it was taken out.

"We do not lose material any more," declares Mr. Shannon. "Everything is thoroughly accounted for in this way."

Each man has a time book, which he enters up and turns in on Friday nights.

The system is thus complete and it is possible to follow everything that is done closely and keep tab on accounts, material, etc.

Electric Heating Now Discussed

Since the inauguration of the Hydro-Electric in Western Ontario, there has been some talk of electric heating. An official of the H. E. commission says:

"The present low rate for electric power should stimulate electric heating for houses, especially in the spring and fall. Under the old rate of eight cents it was almost out of the question, but under the new rate of 27-10ths it is different.

"People who wish to heat a living room in the morning or at night, and do not wish to start the furnace, or use

an unsanitary gas grate, can get an electric radiator, costing from \$10 to \$20, and do their heating at from 2½ to 5 cents per hour.

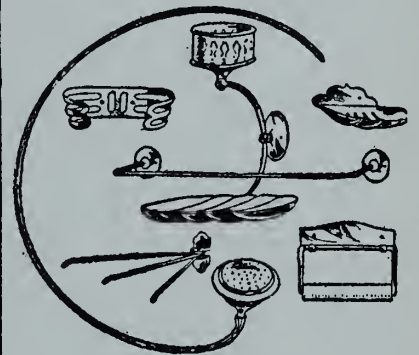
"Electric heating cannot compete with coal at its present price," he concluded, "but there are many things to be considered. For instance, when you turn off your electric heat your consumption ceases, whereas, if you build a fire in the furnace it burns all day."

Heating experts express the opinion that the day is a long way off when electric heating will come into vogue.

ADVERTISING ACCESSORIES.

Victoria, B. C.—The Colbert Plumbing and Heating Co. are making a strong effort to sell bathroom accessories, as shown by the accompanying reproduction of one of their ads. The

BATHROOM SUPPLIES



Let us do the plumbing and furnish the bathroom the way it should be.

COLBERT

PLUMBING & HEATING CO., LD.

Just Above Douglas
726 Fort St. Phone 552

REQUISITION SHEET

N. B.—Workman must fill out and sign one of these slips for all material required.

R. J. SHANNON

DATE 191

TO STOCK-KEEPER:—Please furnish the following

for.....work

At.....

Requisition sheet used to check up material used.

firm believe in pushing the sale of such goods and have, it is understood, been quite successful.

The advertisement shown is attractive and it tells everything necessary in concise form. Splendid use has been made of the small space used.

Plans are being prepared for a new school at Chatham, Ont.

Tenders are being called for the erection of a \$75,000 Y.M.C.A. building at Fort William.

A by-law will be submitted in Edmonton on July 18 to raise \$55,000 for the erection of a nurses' home.

Methods of Handling Vacuum Cleaners

How One Plumber Gave a Practical Demonstration and Made Many Sales—
Starting on Public Buildings is a Wise Plan—Dust Cleaning Promises to be
Important Branch of Sanitary Work.

THE latest development in domestic sanitation is the evolution of the vacuum cleaner. It has solved the problem of effective house cleansing and bids fair to come into general use in a very short space of time. No home can be thoroughly healthful where dust and dirt are allowed to exist and accumulate; and dirt can be banished only through the instrumentality of the vacuum machine.

The broom and the duster of the industrious housewife cannot bring to light the dust which collects in the corners and crevices, but when the suction power of the vacuum cleaner spreads over every square inch of space in the house and draws the very last particle of dust.

It is not a rash assumption, then, to say that the time is not far off when this machine will be found in practically every home, that it will be deemed quite as necessary as bathroom equipment. In the United States, it is rapidly becoming a feature of the household, and the plumber has accepted it as part of his own particular work. This is a natural development, as the plumber is to-day, the accepted authority in all matters pertaining to household sanitation and the installation of vacuum cleaners clearly lies in his domain.

Unfortunately, members of the trade in Canada do not appear to have grasped the possibilities of this new business as yet. Few, comparatively speaking, have even gone to the extent of examining and learning how to work and install the machine; fewer still have endeavored to get any work along that line. It is time that the trade generally awakened to the possibilities in this direction as the business may be taken over by some other trade.

In Public Buildings.

Some plumbers in Canada have taken up vacuum cleaners and have made a splendid success. One firm report that they have handled an agency for a year and a half and have during that time made many installations.

"We started on public buildings," said a member of the firm, in recounting their experience. "We did some canvassing among members of civic boards and convinced them that the buildings of the city should be thus equipped. After some hard work, he secured the contract for installing stationary systems in all the schools in town. They work-

ed, so well there that we got the city council persuaded to put one in the city hall. The Y.M.C.A. then followed suit, and we have hopes of convincing the county council that a system is needed in the court house as well.

"As a natural result people began to get interested," he continued. "They saw how well the system worked in public buildings and it seemed to them that it would work just as well in their homes. We encouraged this idea by advertising well and sending out literature. Since then we have sold a great many hand cleaners and have installed a few stationary systems in private homes."

"It is our invariable policy now," he concluded, "to canvass the owner of a house where we figure on plumbing and heating work. When planning his new home, the average man is always anxious to include every comfort and we are generally able to persuade him, that he needs something of this kind in the house."

Hold a Demonstration.

Perhaps the most effectual method of proving the usefulness of the vacuum cleaner is to hold a public demonstration. The public are "from Missouri" on a matter of this kind; they have got to be "shown." It may sound all right on paper and the illustrations may show the machine sucking up dust from all directions to the accompaniment of a gentle rocking motion on the handle of the machine. But the average man and woman are anxious to see it done themselves before they invest their hard earned and long hoarded dollars. Therefore, the wise man will see to it that they are given a chance to be convinced.

A demonstration in the window of the shop will be found effective. Get a collection of old rugs and other articles and turn one of your men into the window with a vacuum cleaner and instructions to clean everything thoroughly. An interested crowd will soon gather. Keep it up long enough and everyone in town will hear about it.

An Admirable Plan

A good scheme was adopted by an Ontario plumber some little time ago. He sent out one of his men with a hand machine, with instructions to call on all their best customers. On arriving at one of the houses, the man would inquire of the mistress if they

had a rug which was dusty. When the article had been produced, he would take it out to the back yard and in the course of a few minutes thoroughly clean it. If the lady of the house brought out anything else that she wanted done, he would do it willingly. Then he would take the machine and move on to the next place. The next day, the proprietor himself would call at the houses where his assistant had been and endeavor to sell one of his machines.

This very practical form of demonstration resulted in a large number of sales.

Hire Out Machines

Some plumbers have followed the plan adopted in other trades and rent vacuum cleaners. This is found to be fairly lucrative and it often leads to sales.

"I started one out last fall," says a Toronto man, "and it had paid for itself before Christmas time. This spring I secured another and both machines have been in constant demand ever since. They have netted me a nice profit over and above the cost of the machine. In addition I have handled a number of orders, for vacuum cleaners from people who had rented one of mine.

Securing Business

The plumber is in a splendid position to secure business in this line. His work takes him into the home and has to do very largely with the problems of domestic sanitation and health. He thus has an unexcelled opportunity to canvass his customers for vacuum cleaners and to convince them that they are very necessary articles.

To handle an agency for a make of vacuum cleaners would not entail any great work and would not in any way distract the plumber's attention from his regular work. It could be handled as a side line—a very lucrative one. Some day dust cleansing will rank as a distinct branch of sanitary work, on a par with plumbing, heating and ventilating.

Why It Is Important

Dust lurks in every corner of a house, no matter how carefully it may be kept and tended. Germs gather and disease may lurk in a place for many months. No house, therefore, can be kept absolutely healthful unless it is

(Continued on page 24.)

Figure Contract Work on Systematic Basis

A Master Plumber Gives a Word of Advice for Fellow Members of the Trade—Some Incidents Showing the Inevitable Result of Loose Figuring.

"Study the specifications. That's the secret. Know exactly what there is to be provided before you figure, and see that nothing is added after that."

In these words a shrewd master plumber summed up an anecdote, with a moral attached, which he had been reciting for the benefit of a group of fellow craftsmen.

It related to an incident in which he had figured some little time before. He had figured on a job, which ran in the neighborhood of five hundred dollars and had taken his bid in to the architect. Before leaving the office of the latter he took another glance at the plans and specifications. He noticed that no mention was made of weeping tile. The architect's assistant was in the room, so he called his attention to the omission.

"Who pays for it?" demanded the M. P.

"Guess we'll let the plumbing contractor provide it," said the assistant, in an off-hand way. "He will pay it all right, and won't mind."

"Give me back my tender," said the other. "I don't want this job."

The item was afterward inserted; this, mind you, after all the tenders were in. The successful tenderer would find himself forced to provide material which he had not figured on, to the extent of about \$22.

"That trick has been played on me before," continued the narrator. "Often I have found myself compelled to provide material or do some work beyond what I had figured on, and, in some cases, I have felt reasonably certain that these items had been added after my figures were in. I don't suppose that it had been done with the deliberate intention of 'doing me.' The chances are that the items were neglected when the papers were first prepared. When the mistake was discovered, the items were added and the plumber made to stand the loss."

"This is the plan I have adopted," he continued. "When I go to look over a job I take a notebook along with me and I jot down everything that is called for. Then I figure on that basis, and I always keep my notes. Then, if a demand is made for certain material or work not included in my list, I know that it has been inserted afterward. If, on the other hand, I find that the mistake was mine and that I should have figured on that particular item, I go ahead and do it without a word. But not otherwise."

This idea is well worth adopting. Loose methods in figuring are responsible for heavy losses. Some men figure up a job in a rough-and-ready way and they hit it wrong as often as they come out on the right side. Not so long ago the writer met an acquaintance in the trade who was looking a little down in the mouth about something. "I am feeling sore over a foolish mistake I made this week," he explained. "I took a job in a double house down here and forgot to count in the kitchen sinks. Then I figured on the soil pipe for one house and forgot to double the amount to cover both houses. I am away out of pocket."

He was a rough-and-ready figurer and such mistakes were not uncommon with



"Guess we'll let the plumbing contractor provide it," said the assistant, in an offhand way.

him. He was making bulls of an equally costly nature right along. But tell him that he should use an estimate sheet and do his figuring on a systematic basis and his only reply would be a scornful laugh.

A Wide Divergence.

As a fair specimen of the loose way that some men figure, take the following incident, which occurred in Toronto within the last month. Two men were figuring on a job for a party who owned two houses of the same size, situated side by side. The only difference in the work in the two houses lay in the fact that the one was farther away from the street main than the other. The unsuccessful tenderer, out of curiosity, asked the owner how the two prices compared. He found out that Brown (the successful tenderer) had been \$12 above his own figure on the one house, but,

strangely enough, had been \$72 below on the other house. The unsuccessful tenderer went over his own figures again and became convinced that his price would just cover the cost of material and labor, plus ten per cent. It was quite apparent that Brown had made a huge mistake somewhere.

It is difficult to conceive that on two jobs almost exactly identical, a man could let his figures differ to the extent of \$84, but that was what Brown had done. What he made on the one house was more than swallowed up by what he lost on the other.

The word of advice with which this article begins is worth hearkening to. Study each job carefully before committing yourself to a price. Figure systematically and know exactly what you are expected to do.

Elected Officers.

At the regular meeting of the Master Builders' Exchange at St. John, N.B., officers were elected for the year, several master plumbers being included in the following:—Robert Maxwell, president; H. L. McGowan, 1st vice-president; J. S. Seaton, 2nd vice-president; C. F. Stevens, secretary; J. H. Burley, treasurer; W. J. Crawford, sergeant-at-arms. Investigating committee, James Sproul, chairman; N. E. Earle, B. A. Denniston, F. S. Walker, Herbert Brown. Finance committee, G. S. Fisher, chairman; Wm. Godsoe, Jas. McDonald. Legislation committee, J. E. Wilson, chairman; P. J. Mooney, J. W. Myles, George Blake, Enoch Paul. Arbitration committee, John Flood, chairman; Edward Bates, Joseph Sliney, E. W. Herrington, Samuel Fox, Joseph Gregg, W. H. Thomas, Robert Green. Constitution and by-laws committee, H. L. McGowan, chairman; James Sproul, J. S. Seaton, H. C. Taylor, S. A. Thorne, John Boyd, B. A. Denniston, Samuel Drury.

Municipal Undertakings.

Bridgeburg, Ont., will submit an \$8,000 by-law for sewer extensions.

A by-law will be submitted to the ratepayers of Calgary, to raise the necessary funds to install catch basins on the streets.

Equipment is required at Medicine Hat for an extension to the waterworks.

Public Buildings.

Tenders are being called for additions to the Galt, Ont., hospital.

A \$13,000 site has been purchased at Lethbridge, Alta., for a new convent.

The Canadian Theatres, Ltd., are planning the erection of an up-to-date vaudeville house on St. Catherine Street, Montreal.



POINTS ON HEATING

by
CHAS. H. DENISON



Chapter 10.

In this chapter I desire to call attention to a number of very common mistakes that are liable to happen to most any job at any place in the land. These mistakes are due to carelessness, ignorance, lack of taste and a desire to "turn the corners short" upon the part of the contractor. We will divide them into three divisions, viz., the boiler, the pipe lines, the radiators.

Common Mistakes Regarding Boiler.

The first is in regard to its proper size. Not one fitter in five can allow correctly. It is all more or less of a game of guessing. Some guess 25 per cent. excess, others 50 per cent. There seems to be no absolute guarantee on the part of the manufacturers as to just how much the boilers will or will not do and the best advice that I can give in this respect is to find out for yourself and when you hit a boiler that comes near doing what you expect, why tie to it as you can then tell where you are at.

It is quite common to see the boiler set out of level. This comes from failing to use the level at the right time, trusting too much to the eye, or placing the boiler on the foundation when same has not "set". It makes a bum looking job and it is one that can be very easily avoided if you will only take a little pains.

Another mistake is the location of boiler. Place it near the chimney and, if possible, with the front facing the light. Many times the boiler will be ordered with no consideration, whatever, as to the height of the cellar. It would not seem possible that a contractor could be so careless, but the following incident took place within the past four years. A certain boiler was ordered for a certain job and the boss himself was on the works taking a look around before putting in the order. He was supposed to be a good man and one who knew his business.

Relying on the judgment of the boss, the fitter set up the boiler and found that the top of the boiler came within six inches of the cellar beams. Now the boiler had to be shifted to one side, a

pit dug and cemented and the entire cost of the transaction added some \$38.00 to the expense of the installation; all because the boss failed to take proper notice.

Common Mistakes on Pipe Lines.

The commonest is probably improper "pitch" or no "pitch" at all. When set to look over a job, about the first thing that one does is to examine the mains and branches to ascertain in this regard. Another mistake that has come to be quite common since the "small pipe" craze has struck the country, is to find that the main, or some of the branches have been run too small and so fail to perform their expected duties. A small book on pipe sizes can be purchased for the insignificant sum of fifty cents, yet many following the business are too indifferent to make the investment and take the time to post themselves in this respect, when a couple of hours' time and said money invested would save them perhaps twenty-five or more dollars on one single job.

Mains that are as crooked as a ram's horn are quite a common occurrence. Poor dies, too loose followers and incorrectly tapped fittings are the cause (mostly) of mains so put up. Sometimes the fitter is in too much of a rush, or simply does not care and so gets the threads crossed, hence the misshapen main and resulting leak at that point.

A main can acquire various "humps" from being hung wrong in the pipe hangers. It will also buckle from lack of room to expand to the extent called for by its length, and in the latter instance will probably be the cause of several broken or cracked fittings which must be replaced at a considerable effort and unnecessary expense.

The most conspicuous mistake is visible when the main and boiler are covered without exercising a sufficient amount of care. It is just as easy to put the covering on right, in the first place, as it is to make the job resemble a spell of sloppy weather.

Common Mistakes Relating to Radiators

Every man-jack of you has, upon some occasion gone into a room and ob-

served a great elephant of a radiator thrusting itself out into the room at an expense of space, convenience and showing a total lack of good taste.

There are enough different brands of radiators on the market to suit the different classes of customers, the different sizes and styles of rooms and yet not to be forever and forever in the way, for a radiator can not be changed very easily and, when once set, generally remains placed at that point unless the building burns down or the job is re-modeled.

When the job is being roughed in, the fitter frequently fails to allow enough (or perhaps too much) for the mop board and quarter round and as a result the radiator comes wrong and the the deuce is to pay. It juts out too far from the wall, or else the legs must be let into the wood. Get the right measure from the boss carpenter, cut it into a block of wood and carry same with you as you lay out the work and there should be no mistakes in this respect.

Some people are too cheap to pay a little extra for a window radiator and have the nerve to put a tall radiator directly centering in the window. They deserve exactly the job that they get, no more, no less. The time was when a steamfitter would have parted with his eye teeth rather than to see a painter bronze or decorate the radiators. This duty was regarded as the proper right of the fitter and he clung to it for many years, even so unto this day in certain sections of the country. In many other places, however, the decorations are left all to the painters and much more artistic results and combinations are the result. To my mind it was never a steamfitters' duty, anyway, and I was glad to get blow the task. Dust shields on the radiators should be used more frequently than they are. It is a most disgusting sight to see the walls and ceiling all streaked up in the vicinity of the radiator all because these shields are not used, from a mistaken sense of economy.

News of the Manufacturers and Wholesalers

BRANCH IN EDMONTON.

It is stated in the Edmonton Capital that the Pease, Waldon Co. will establish a wholesale branch in Edmonton in the near future. The Alberta representative of the company, J. H. Neelands, was in that city recently, looking over the situation. He will be joined there by J. M. Bell, Winnipeg manager and President McKinnon, of the Pease Foundry Co.

A BIG PLANT.

Plans and specifications have been prepared for the new cold storage plant which it is expected will be fully completed by November 1, at Prince Albert, Sask. When completed, this will be one of the few cold storage plants in the province. It is understood that the company mean to exploit the great fish resources of the northern lakes, some of which teem with whitefish.

Hugh A. Green left Prince Albert on July 2 for Scotland to complete arrangements there with parties interested in the enterprise and with fish dealers in connection with the fish curing business.

The company has been formed with capital stock of \$100,000 and the officers are: J. E. Bradshaw, president; C. E. Gregory, vice-president; N. W. Morton, secretary-treasurer. These three gentlemen, together with Hugh A. Green and Daniel Green, compose the board of directors.

FAILURE OF FIRM.

Mr. Justice Sutherland has made an order at Osgoode Hall, winding up the Standard Fitting and Valve Co., Guelph, on the petition of the Dominion Bank, a creditor for \$50,999.19. J. M. Taylor, Guelph, is appointed provisional liquidator and a reference is made to the local master at Guelph. The company was incorporated in May, 1907, with a nominal capital of \$100,000, which was increased in 1909 to \$200,000. The capital subscribed and paid up amounts to \$151,700.

It is understood that the buildings and machinery are mortgaged to J. W. Lyon, Guelph, for \$12,000, on which \$1,000 and interest is now overdue.

POINTS ON SANITATION.

The N. O. Nelson Manufacturing Co., St. Louis, have sent out a booklet, entitled, "A few points on sanitation for schools, institutions, factories, etc." A

complete line of plumbing fixtures is shown, sanitary drinking fountains being particularly featured.

UNIQUE ADAPTATION OF TRADE MARK.

We are indebted to W. H. Wiggs, of the Mechanics' Supply Company, Quebec, for the gift of a statuette (as herewith illustrated) of their "trade mark." This "Small Boy" has been used by them for a number of years in their advertising matter and makes a very attractive advertisement. The idea, however, of making it into this present



molded form is unique and the first we have seen issued to the trade in Canada.

The work of preparing this statuette was entrusted to a prominent Italian sculptor, resident in Toronto, and he has been very successful in reproducing the features and pose of the young mechanic.

CANADIAN MANAGER MAGNOLIA METAL CO.

Many Canadians, particularly old McGill University boys, will be interested to know that F. L. W. Saunderson has been appointed the Canadian manager of the Magnolia Metal Co., with factory and offices located in Montreal, and whose connections and business are world wide. Mr. Saunderson graduated at McGill University in class of 1891, taking

a course in electrical engineering and afterwards took a special practical electrical course with the Thompson-Houston Electric Co., at Lynn, Mass., and for the past fifteen years has been identified with the mill supply business in Canada. He enters upon his new duties well equipped to insure that the prominent interests entrusted to him will be cared for and advanced. Mr. Saunderson is widely known and prominently connected throughout the Dominion; his father, C. E. Saunderson, prior to his decease, was senior partner in the well known Montreal firm of B. & S. H. Thompson, and his brother, A. O. Saunderson, is at the head of the Saunderson Mfg. Co., of Sydney, N.S.

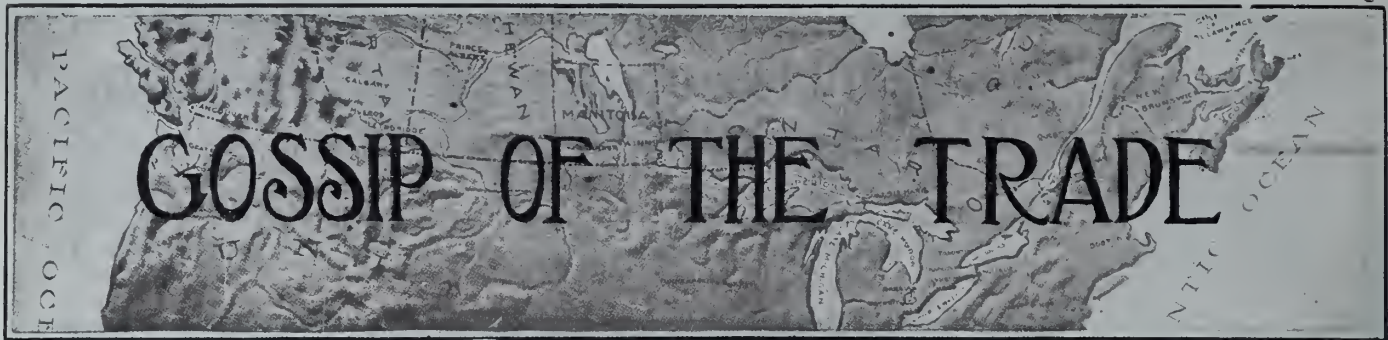
NEW STOREHOUSE.

The contractor in charge of the erection of a storehouse for the Canadian Brass Co., Galt, has completed his work. The building measures 76 by 60 feet and is of brick construction. Concrete floors have been laid and all the partitions are nine inches in thickness. It is said to be a model building in its way.

MUST SUBMIT PLANS

Plumber and Steamfitter has received a copy of the following notice from Dr. J. W. McCullough, chief health officer of Ontario:

"Municipal authorities will please take notice that under Section 30 of the Public Health Act the Municipal Council of any municipality undertaking the establishment of a system of waterworks or sewerage is required to submit the plans and specifications thereof for approval the Provincial Board of Health. In addition, the preamble of the by-law for the raising of money for such purposes must recite such approval. (Amended, 1911.) In the case of a public water supply, an analysis of the water is required. On application of the Medical Health Officer to the Laboratory of the Provincial Board of Health, sterilized bottles and instructions for the taking of samples will be forwarded free of cost. Such samples must be returned prepaid. Having in view the importance of preserving the pure character of the rivers, streams and lakes of the province, the regulations of the Board strictly provide that garbage, manure, excreta, vegetable or animal matter or filth shall not be discharged into or allowed to pollute such waters."



Will Build New Store.

H. M. Sweigles, plumber and tinsmith, Fonthill, has purchased a piece of property on which he will erect a handsome tinsmithing and plumbing store.

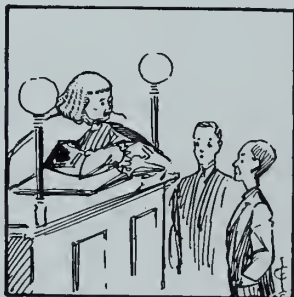
News Briefs.

The Supreme Heating Co., Welland, Ont., closed down during the hottest days of the recent warm spell.

A meeting to be held at Nelson, B.C. of the plumbers, bricklayers and all building trades, with the purpose in view of forming a union of all building trades.

Deserved a Chance.

Two plumbers—broke and looking for jobs—were chased off a train at Utica, N.Y. When they persistently got on at the other end of the train, they were promptly arrested. "A plumber ought not to be broke so he will have to steal



rides," said the judge, "If a plumber can get three or four good jobs a year, he doesn't have to work the rest of the time." "We're looking for those jobs now," observed one of the men. "You deserve a show then," said the judge and he let them go.

Contracts Awarded.

Among recent contracts awarded are: Plumbing Centenary Church, Hamilton, Fitzsimmons Bros.; plumbing new school, St. Thomas, J. Williams, \$1,127.

Water Meters.

The Vancouver Water Committee intend to put water meters on all civic buildings. The city engineer was instructed to bring in an estimate of the cost.

Struck by Bullet.

While working in Cooper's plumbing shop at Grand Forks, a few days ago, Carl Fitzpatrick was struck by a stray bullet and painfully wounded. The missile was explained by the fact that a number of young men were at target practice in the neighborhood at the time.

Cold Storage Plant.

It is expected that work on the packing and cold storage plant of the Northern Produce Co., Prince Albert, Sask., excavations for which were made last year, will be commenced shortly. The plant will cost in the neighborhood of \$55,000.

Drowned While Bathing.

Follis Berney, employed with A. Welch & Son, plumbers, Toronto, was drowned Sunday while bathing at Port Sidney, Muskoka. He was affected by sunstroke and fell out of a canoe, sinking before help could arrive. He was a son of George Berney, hardware merchant, Caledon East.

Returned to Work.

A little trouble arose last week among the journeymen plumbers employed on the King George Hotel, Calgary. Believing that they were not to receive as much pay as formerly they laid off for a few hours. The matter finally was satisfactorily arranged and the men returned to work.

Get Contract in West.

Bernhardt & Gies, Preston, have secured a big contract in Medicine Hat. It consists of the equipment with plumbing and heating apparatus of an entire block containing stores, offices, etc., together with the galvanized iron work for ceiling and roofing. Mr. Gies and staff expect to go to Medicine Hat next month and to be absent about 6 weeks.

News Briefs.

Purdy, Mansell Ltd., Toronto, have received the contract for repairing the boilers at the main civic pumping station.

The Struthers block, Galt, in which Ross & Short, plumbers are located, has been sold to F. A. Scott.

Was Badly Burned.

The clubhouse of the Don Rowing Club, Toronto, was burned down as a result of the explosion of a lamp carried by W. Hodgson, a plumber working in the building. Hodgson was badly burned about the hands and face and all his hair was singed off. He did not know just what happened. He thought that the flame of the lamp had come in contact with some inflammable material, for all he saw was a sudden bright flame which he was powerless to control. He had the lamp in his hand at the time. Fire Chief Thompson took him to the house of Dr. Ambrose Fish in his automobile where his injuries were attended to.

Holding Annual Excursion.

Local No. 46, Journeymen Plumbers, Toronto, will hold their annual excursion to Berlin on Saturday, July 29. A



hearty invitation is extended to all in the trade to go along. A special C.P.R. train will be secured.

Increase for Inspectors.

The Ottawa board of control has revised the schedule of salaries. The chief plumbing inspector is increased from \$900 to \$1,000, with an annual increase of \$100. The assistant plumbing inspector is raised from \$850 to \$900 and the appointment of a second assistant is under consideration.

Refrigerating Contract.

The contract for the refrigerating plant at the new Mutual Street rink, Toronto, has been let to the Delavergne Refrigerating Co., New York. The equipment will be installed by the middle of November.

Is Sunday Bathing Legal?

The lawyers and the ministers in Toronto cannot reach an agreement as to whether the public swimming baths should be opened on Sundays. While the lawyers wait for the preachers, and the preachers wait for the lawyers, the heat continues; and those waiting at the edge of the bath for a Sunday plunge



may be pardoned if, metaphorically, speaking, they consign lawyers and preachers to the bottom of the bath. The majority of the public would doubtless be content to take its bath first, and listen to the solution of the problem in ethics afterwards. For dust, dirt and heat come to us on Sunday as on other days of the week, and it is then that five minutes in the water will do more good than five hours of wrangling and five lawyers' opinions put together.

Meters on Pipes.

W. S. Craig, Halifax, has signed the contract to put meters on the water service pipes in that city and the work of installation has been started. There has been considerable opposition to the plan and certain section of the people have appeared anxious to prove that meters are dangerous from a health point of view. This idea is effectually dispelled by A. L. Smith, an expert, who reports that there is absolutely no danger.

Inspector Appointed.

The Hamilton city council to-night ratified the appointment by the Board of Control of D. Wark as plumbing inspector at a salary of \$950 per annum. In the by-law appointing the plumbing inspector and outlining his duties, the following clause occurs. "No permit shall be granted to install plumbing fixtures unless the owner of the property or someone on his behalf, shall first pay to the treasurer the fee therefor as follows:—The permit to install plumbing fixtures where value of building is \$5,000 and under—\$1, where the value is above \$5,000 and not above \$10,000—\$2. Where value is above \$10,000, \$3. The charges have no reference to the schedule now in existence which will continue to be in force.

Starts New Shop.

A. Whiteley, who recently arrived from England, has opened a shop on Crowfoot street, Gleichen, Alta. He will do plumbing, hot water and steamfitting.

McLachlan Bros., Vancouver, have disposed of the manufacturing end of their business to the Scoullar Sheet Metal Works and will devote their entire attention to the retail hardware trade.

R. Milford & Son, Carp, are leaving for Smith's Falls and have rented their property to Geo. Bateman who will open a tinshop there.

New Sanitary Appliances

In a recent exhibit of sanitary ware and appliances, made by Davis, Bennett & Co., Horseferry Road, London, S.W., some interesting developments of recent date were shown. The British Trade Journal, in describing the exhibit, states that the items shown ranged "from the fittings of artisans' dwellings and street lavatories to the costly luxury of completely fitted bath-rooms, ranging in price from £12 to £100. The bath-rooms shown included an example of the room of which sixty-six have been installed at the Hotel Cecil; there was a Carlton Hotel room, and a luxurious bath for the Duke of Alba in his palace at Madrid; the Hotel

Ritz in the same city has also been fitted with bath-rooms by this firm."

The fixtures that go to swell the cost of the more expensive rooms include a canopy bath with plated fittings and a glass hood and a white marble lavatory surmounted by a white marble framed mirror.

A bath-room weighing machine with a measuring rod is included in the furnishings of one of the most elaborate rooms.

A feature of one setting was a concealed closet, enclosed with doors made to open automatically on the raising of the lid.

It is stated that a bath-room fitted up with all these appliances represents the extreme of luxury in domestic bathing and involves an outlay of something like £130.

NOTICE TO SUBSCRIBERS.

The Subscription Dept. have recently received a number of complaints from subscribers, stating that their papers are late in arriving. As we are most anxious that our readers should receive their papers promptly, we earnestly request **ALL SUBSCRIBERS CHANGING THEIR ADDRESS** to notify the office promptly. When it is necessary for the Post office to re-address papers considerable time is lost.



Bathroom with concealed appliances

METHODS OF HANDLING VACUUM CLEANERS

(Concluded from page 18.)

quite clean; and, as said before, no house can be quite clean unless some more powerful agency is brought to bear than the hand appliances of the domestic drudge.

The vacuum cleaner has other advantages. It saves time and labor. It is, indeed, the housewife's friend. Once used, it becomes indispensable. Why then, should not the plumber bestir himself to secure a business which has so much to recommend it, and which holds out such splendid promises of profit?

PLUMBING AND HEATING MARKETS

MONTREAL.

Montreal, July 14.—There is a great deal of work under way just now and the trade is busy. There are contracts large and small and with activity quite general the demand for the various supplies is naturally heavy. The opinion in regard to the present year being particularly good from the standpoint of the trade is to all purposes unanimous and the fall should see just as brisk conditions as those that have obtained thus far this year. The demand is quite general and all parts of the trade seem to be well pleased.

Enamelware.—There is a great deal of work in progress and from the number of buildings in the course of construction there is still much to be done. Work should be well maintained through the entire season. Demand for enamelware has been good and there is every prospect of its continuing so.

Boilers and Radiators.—The demand for heating apparatus of this kind is good, showing quite a tendency toward it. The amount of construction work throughout the city and in the suburbs readily explains the healthy condition of trade in this department as well as in the other branches.

Lead Pipe.—Lead pipe is in good demand, receiving its share of attention at this season. The discount on lead pipe and waste is 30 p.c.; caulking lead is 4½ cents a lb.; the discount on traps and bends is 50 per cent.

Solder.—The price of solder here is unchanged. Half and half is quoted at 24½ cents and wiping 22c. The demand is good and the market continues its firmness.

Soil Pipe.—It was stated a few days ago that business records quite a little cutting here and there but that no one was complaining. Soil pipe is included in the list. Demand is good. Quotations are unchanged. For medium and heavy pipe up to 6 in., 70 and 10; 7 and 8 in. pipe is 50; light pipe 60 and 10; fittings 70 and 10 per cent.

Iron Pipe and Fittings.—There is a general demand with fittings also going well. Prices have remained steady; black iron pipe per 100 ft. on 1 in. basis is \$4.70,

and galvanized \$6.35. Discounts on fittings are: Malleable fittings, 40; cast iron, 65; standard bushings, 70; headers, 60; flanged unions, 65; malleable bushings, 65; nipples, 75 and 10; malleable lipped unions, 65 p.c.

TORONTO.

Toronto, July 14.—Everything is now going with a rush in the plumbing world. The supply houses are exceptionally busy and large orders are being placed which ensure a brisk trade for the next few months at least. "We are expecting one of the busiest falls on record," said one supply man. "Everything points to a heavy demand all along the line. Building work is going ahead briskly."

Prices are remaining steady. Solder is still selling at an unusually high price, despite the fact that a reduction was expected a few weeks ago. This is due to the unprecedented developments in the tin market. Tin is still "soaring."

Enamelware.—The demand is growing. Although in a large majority of cases, new residences and buildings have not yet reached the stage where sanitary fixtures can be installed, there is quite a little interior finishing work being done. A number of large orders are being placed and the supply houses report a good volume of business ahead. Prices are holding firm.

Boilers and Radiators.—The heating firms are now finding the business all that they can conveniently handle at this season. Although, the reported shortage in bricks still hampers building operations to some extent, many new structures are being equipped for heating, and in addition, there are large orders being placed for late summer and fall delivery. The number of advice orders is reported to be unusually heavy for this time.

Soil Pipe.—The demand is growing heavier. Although varying quotations are received, the prevailing discount on medium and heavy is 70 and 10. On the 7 and 8-inch sizes, the discount is 50 per cent.

Lead Pipe.—Big demand is reported by the supply men. Lead waste sells at 9c. per lb., with a discount of 30 per cent. Caulking lead is quoted at 4½ cents per lb. The discount quoted on traps and bends is 50 per cent.

Iron Pipe and Fittings.—The tone to the market is heavy. There is a steady, brisk demand with prices remaining firm. Cast iron fittings are quoted at 65 to 70. Malleable fittings stand at 37½ to 40 per cent. Other quotations are: cast iron bushings, 70; malleable, 67½; nipples, 75 and 10; headers, 60 and 10, although some quote 67½ and 70; flanged unions, 70; malleable-lipped unions, 65 per cent.; galvanized pipe, \$6.18; black pipe, 1-inch size, \$4.54.

Solder.—The continued upward trend in tin has had the inevitable effect of keeping solder high. Wiping is still quoted at 24 cents, the prevailing price at last time of writing. Then, however, some firms were asking 26 cents and, as no quotations were received to-day above 24 cents, the price on this line may perhaps be termed a little easier. This is not the case with half-and-half, which still sells at 27½ cents. The high prices are pretty certain to continue for some little time, as tin shows no sign of coming down.

Metals.—This is never a busy season in the metal trade, and it is not surprising to learn that there has not been much business offered during the past week. The record-breaking heat wave has seriously affected the demand and, as a matter of fact, there has probably been less actual business booked than for some little time past.

A very encouraging feature of the situation is that conditions are really improving in the United States. The outlook for the latter part of the year is considered quite promising and Canadian furnaces as well as importers of British pig iron are looking forward to a cessation of the extremely low prices which have been quoted by American furnaces recently, in the Canadian market.

Competition among metal merchants has been unusually keen this week, and some low prices have been quoted for the little business that offered.

Tin is selling at the extreme price of 48 cents.

COLT RINK WON.

After returning from Port Arthur, Harry Mahoney got together a "Colt" rink and entered them in the Guelph lawn bowling tournament. Despite the fact that he was supported entirely by beginners, Mr. Mahoney skipped the rink to victory in the Royal City competition, defeating the veteran Euler rink from Berlin. Fred Smith, another Guelph master plumber, was on the rink.



Roll Rim Sink Perfection

We can supply you with the latest improvements in this line. The sink with the new shape. No more chipping around the Strainer. In great demand. Let us have your orders early for these Sinks.

Plumbing Supplies of All Kinds

THE NATIONAL PLUMBING SUPPLY CO., Ltd.

115-117-119 ADELAIDE ST. WEST

PHONE ADELAIDE 733; ADELAIDE 732



Hot Water Quick Opening Radiator Valve.

"Miller" Hot Water and Steam Radiator Valves

The bodies and bonnets of our **Hot Water Quick Opening Radiator Valves** are made in one piece, thus having a great advantage over other valves, as it leaves one less joint for possible leakage. The cone-shaped Disc prevents sticking.

Our superior **Steam Radiator Valves** have very low seats and a high lift of Disc.

We manufacture both valves from $\frac{1}{2}$ " to 2", with or without union, also union elbows.

Every valve is thoroughly tested and has an unlimited guarantee. They are built for service. Ask your jobber for them.



Steam Radiator Valve.

MILLER LIMITED, - LONDON, CAN.



KERR

Steam and Hot Water RADIATOR VALVES

are past the experimental stage.

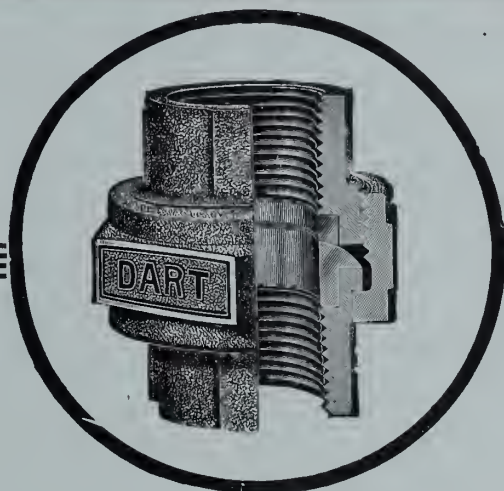
They set the standard for high quality in material and finish and stand the many tests of use.

Note the seats in Kerr's New Pattern J.D. Radiator Valves which insure perfect drainage.

The Kerr Engine Co., Ltd.

VALVE SPECIALISTS

Walkerville - - Ontario



The BRONZE to BRONZE Connection in

DART UNIONS

Prevents rust and corrosion at the joint, so assures a perfectly tight and lasting union.

Dart Unions make joints quickly and easily, whether in or out of line—joints that stay tight until deliberately loosened, then are just as good for use as before.

Your jobber will supply you, and their use will save a lot of installation time.

They need no further attention when installed.

DART UNION CO., Ltd., TORONTO

Condensed or "Want" Ads.

MISCELLANEOUS.

ADDING TYPEWRITERS write, add or subtract in one operation. Elliott Fisher, Limited, Room 314, Stair Building, Toronto.

ACCURATE COST KEEPING IS EASY if you have a Dey Cost Keeper. It automatically records actual time spent on each operation down to the decimal fraction of an hour. Several operations of jobs can be recorded on one card. For small firms we recommend this as an excellent combination—employees' time register and cost keeper. Whether you employ a few or hundreds of hands, we can supply you with a machine suited to your requirements. Write for catalog. International Time Recording Company of Canada, Limited; office and factory, 29 Alice Street, Toronto.

BUSINESS-GETTING Typewritten Letters and real printing can be quickly and easily turned out by the Multigraph in your own office—actual typewriting for letter-forms, real printing for stationery and advertising, saving 25% to 75% of average annual printing cost. **AMERICAN MULTIGRAPH SALES CO., Limited, 129 Bay St., Toronto.**

COPELAND-CHATTERSON SYSTEMS—Short, simple. Adapted to all classes of business. The Copeland-Chatterson Company, Limited, Toronto and Ottawa. (tf)

COUNTER CHECK BOOKS.—Write us to-day for samples. We are manufacturers of the famous Surety Non-Smut Duplicating and Triplicating Counter Check Books and Singis Carbon Pads in all varieties. Dominion Register Co., Ltd., Toronto.

COUNTER CHECK BOOKS—Especially made for the plumbing and steamfitting trade. Not made by a trust. Send us samples of what you are using—we'll send you right prices. Our holder with patent carbon attachment has no equal on the market. Supplies for binders and monthly account systems. Business Systems, Limited, Manufacturing Stationers, Toronto.

THE money you are now losing through not having a National Cash Register would pay its cost in a short time. Write us for proof. The National Cash Register Co., 285 Yonge St., Toronto.

DOUBLE your floor space. An Otis-Fensom band-power elevator will double your floor space, enable you to use that upper floor either as stock room or as extra selling space, at the same time increasing space on your ground floor. Costs only \$70. Write for catalogue "B." The Otis-Fensom Elevator Co., Traders Bank Building, Toronto. (tf)

EGRY BUSINESS SYSTEMS are devised to suit every department of every business. They are labor and time savers. Produce results up to the requirements of merchants and manufacturers. Inquire from our nearest office. Egray Register Co., Dayton, Ohio; 123 Bay St., Toronto; 258½ Portage Ave., Winnipeg; 308 Richards St., Vancouver.

FIRE INSURANCE. INSURE IN THE HARTFORD. Agencies everywhere in Canada. (tf)

HUNDREDS OF TYPEWRITERS of every make and condition are being traded in as part payment on the famous MONARCH. Price and quality are the levers we use to prevent over stock. We believe we can give the best bargains in rebuilt typewriters in Canada. A postal will bring our catalogue and full information. The Monarch Typewriter Co., Limited, 46 Adelaide Street West, Toronto.

KAY'S FURNITURE CATALOGUE No. 306 contains 160 pages of fine half-tone engravings of newest designs in Carpets, Rugs, Furniture, Draperies, Wall Papers and Pottery with cash prices. Write for a copy—it's free. John Kay Company, Limited, 36 King St. West, Toronto.

MOORE'S Non-Leakable Fountain Pens. If you have fountain pen troubles of your own, the best remedy is to go to your stationer and purchase from him a Moore's Non-Leakable Fountain Pen. This is the one pen that gives universal satisfaction and it costs no more than you pay for one not as good. Price \$2.50 and upwards. W. J. GAGE & CO., Ltd., Toronto, Sole Agents for Canada.

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PENS—The very best Pens made are those manufactured by William Mitchell Pens, Limited, London, England. W. J. Gage & Co., Limited, Toronto, are sole agents for Canada. Ask your stationer for a 25c. assorted box of Mitchell's Pens and find the pen to suit you.

THE "Kalamazoo" Loose Leaf Binder is the only binder that will hold just as many sheets as you actually require and no more. The back is flexible, writing surface flat, alignment perfect. It cannot get out of order. No exposed metal parts or complicated mechanism. Write for booklet. Warwick Bros. & Rutter, Ltd., King and Spadina, Toronto.

WAREHOUSE AND FACTORY HEATING SYSTEMS. Taylor-Forbes Company, Limited. Supplied by the trade throughout Canada.

BUSINESS CHANCES.

FOR Sale Plumbing and Heating and Tinsmithing business in city 50,000, first class stand and good line of customers. Good reasons for selling. Apply Box 575 Plumber and Steamfitter, Toronto. (16)

FOR SALE IN NOVA SCOTIA—A complete shop equipment for up-to-date plumbing, heating and sheet metal working. Shop including 8 ft. cornice brake, combined punch and shears, and easy working dies up to 4" capacity. For particulars apply J. J. O'TOOLE, Dartmouth, N.S. (14)

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MacLean Publishing Co., 143-149 University Ave., Toronto

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Plumber and Steamfitter receives, from time to time, enquiries for the names of manufacturers of various lines. These enquiries come from firms who usually intimate they have looked through Plumber and Steamfitter but cannot find any firm advertising the line in question. In many cases these firms are anxious to secure the information at once. This page enables manufacturers to keep constantly before the trade lines which it would not pay to advertise in larger space.

EMERY WHEELS.



Canadian Hart Wheels
442 Barton St. East, Hamilton
Corundum and Emery Wheels
Grinding Machines, Beaver Oil Stones.

SHELF BRACKETS.



Will Hold Up a Shelf
That's what a shelf bracket's for For this purpose there can be NOTHING BETTER, NOTHING CHEAPER than the BRADLEY STEEL BRACKET. It is well Japanned, Strong and Light. The saving on freight is a good profit aside from the lower price at which the goods are sold. Order direct or through your jobber.
ATLAS MFG. CO., NEW HAVEN



THIS IS THE DAY OF INVESTIGATION

Get in line and let us prove to you that the

GENUINE
Armstrong Stocks and Dies
ARE THE BEST.
Catalogue on request.



The Armstrong Mfg. Co.
317 Knowlton St.
Bridgeport, Conn.

FILTERS.

Anti-Splash Tap Fitters
The "Galvo" Filter and Water Steriliser
"Perfection" Fire Extinguishers
There's good money in them for hardware dealers.
Write for Prices.
The Anti-Splash Filter Co.
OWEN SOUND - - ONTARIO

MANUFACTURERS' AGENTS.

The Manufacturers Sales Co.
MONTREAL
Frederick H. Reid, Manager
Representing manufacturers of high-class specialties, including "Handhook," "So-Clean," and others.
We are open at any time to receive propositions from first-class manufacturers who wish to be represented in Canada. Write at once. Best of references.

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Wholesale Commission Merchants and Manufacturers' Agents. Cars Distributed, Warehoused and Forwarded. Warehouse on Transfer Track. Business solicited.
OUR POSITION IS YOUR OPPORTUNITY
SASKATOON, WESTERN CANADA

BRONZE POWDERS BRONZE LIQUIDS

The
Canadian Bronze Powder Works
Montreal Toronto
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Send us your orders and we guarantee the quality

When writing advertisers kindly mention having seen the advertisement in this paper.

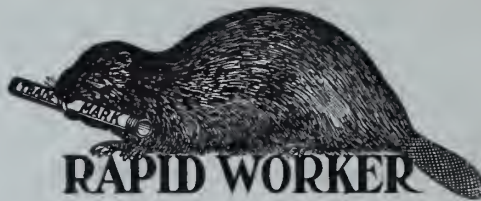
To the Manufacturer or Wholesaler—

If it were possible to employ a traveller who could call on thousands of the best dealers all through Canada every week, what salary would you figure he'd be worth—even supposing he did nothing more than go in and shake hands with these dealers, under such circumstances they'd be glad to see him.

Would he be worth \$200, \$300 or \$500 per week? Many a house would pretty nearly let him fix his own salary.

Equip an advertisement in this paper with a verbal handshake for every dealer in Canada, and a frank, brief, pointed talk about your goods and you add a traveller to your staff who will make thousands of calls a week for you at a salary of \$4 to \$8 a week—less than you would pay a first-class stenographer.

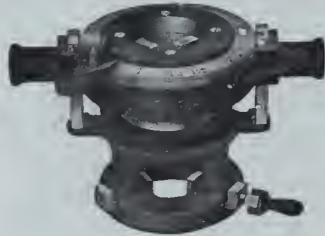
Of course this traveller won't displace any of your regular salesmen, but he will help them to sell more goods and open up more new accounts.



One man with a Beaver Die Stock is worth two or three men with any other Die Stock made.

"Beaver" Adjustable Die Stocks

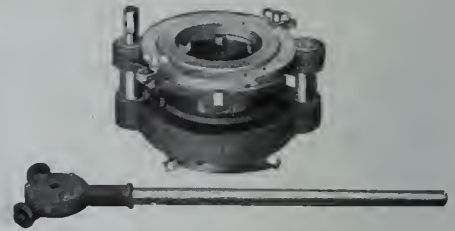
HAVE cut the cost of pipe threading in two because they will thread all sizes of pipe without changing dies. They are built on the receding principle which positively enables one man to thread any size of pipe and produce absolutely tight joints for all work, including hot water. They save the time formerly used up in changing dies and looking after loose parts, and eliminate all of thread-stripping when backing off.



No. 25A, threading 1, 1¼, 1½, 2-inch pipe.
A boy can operate it,



No. 6, threading ¼, ½, ¾ inch, complete



No. 60. Uses two sets of dies. One set cuts 2½, 3, 3½ in the other cuts 4, 4½, 5, 6 in.; they are inserted without moving any parts.

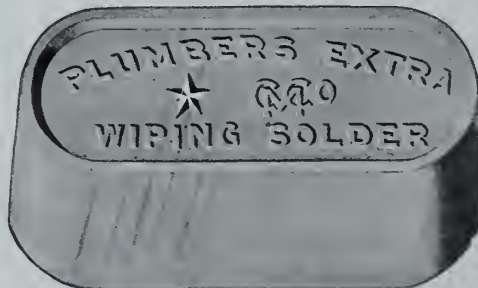
No loose Bushings or loose Dies on No 25A and No 6, and they cut 1, 1¼, 1½ and 2-inch pipes.
We can furnish a separate set of dies for 1, 1¼, 1½ and 2-inch pipe

Write us for Illustrated Price Lists.

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66 Richmond Street East Toronto, Ontario

For a first class joint use **EXTRA STAR WIPING SOLDER.** It works like putty and sticks like glue.

The purest treasure
Mortal times afford:
Is Spotless Reputation.
King Richard II.



EXTRA STAR WIPING
SOLDER
Has a Spotless Reputation.

The Canada Metal Co., Ltd., FRASER AVE., Toronto

CAST IRON FITTINGS

Being manufacturers of Cast Iron Fittings exclusively, we are naturally in a position to give quality the first place, which accounts for the high standard maintained.



That our fittings are being recognized by the trade as a standard is proven by our largely increased sales which have made the installation of additional machinery necessary.

Standard Fitting & Valve Co., Ltd. - Guelph, Ont.



YOU CAN SAVE MONEY BY DEALING WITH US

Our stock of Plumbers' Supplies is one of the largest in the Dominion, and embraces all the most reliable lines, from a washer to the complete modern bathroom outfit. When you order

"Scotia" Plumbing Supplies

you get the right goods quick. You save money by getting the

Lowest Prices

consistent with good quality and by avoiding delayed or wrong shipments.

Test us with a trial order for anything in plumbers' supplies.

WM. STAIRS, SON & MORROW, Ltd.
HALIFAX ESTABLISHED A.D. 1810 NOVA SCOTIA

The "Sovereign" Radiator

has a maximum of radiating surface for its size, giving more heat for the coal consumed.

It is made in a large number of designs and will fit handily into any vacant spot in store, office or home.

Wherever "Sovereign" Radiators and Boilers are installed they make good and you reap the benefit of the satisfaction given, as one satisfied customer will influence many others.

Send for Booklet and Particulars.



Taylor-Forbes Co., Limited, Guelph, Ont.

TORONTO: 1088 King St. W. Taylor-Forbes Co., Ltd., 246 Craig St. W., Montreal, Que. Taylor-Forbes Co., Ltd., 1070 Homer St., Vancouver, B.C. W. R. Mathers, 46 Princess St., St. John, N.B. H. R. Moulden & Son, Travellers' Bldg., Winnipeg, Man. The Mechanics Supply Company, Quebec, Que.

AVOID COMPLAINTS THEY EAT UP YOUR PROFITS

It is annoying after you have finished a job, to have your telephone wire kept hot with the complaints of a dissatisfied customer. This can be prevented by using reliable fittings and supplies on every job. The Morrison Line of Plumbing Supplies are thoroughly reliable. We guarantee every article we sell to be exactly as represented.

In W.C. outfits you will find these lines to be thoroughly satisfactory.

"QUALITY"

Closet Combinations

"Elgin" Washdown

"Simplex" Syphon Jet

"Astoria" Square Back Syphon Jet

All our low-down outfits are furnished with our Patent Combined Ball Cock with Shut-off Cock. This is the simplest and most efficient on the market, with full weight copper lining.

THE

James Morrison Brass Mfg. Co.
LIMITED

Toronto

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Ontario

ASTORIA

THE PLUMBER IS JUDGED BY HIS MATERIALS



"EMPIRE" CLOSETS

are the choice of plumbers who know, and to recommend them is to advertise your own standing in the trade.

The seat is of special construction, the tank large and the bowl well made and of good shape.

Full range of Plumbers' Supplies. Immediate shipments guaranteed.

EMPIRE MANUFACTURING CO., LTD.
LONDON, ONT.

PLUMBER & STEAMFITTER

and Sanitary Engineer of Canada

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TORONTO, 143-149 University Ave.

WINNIPEG, 34 Royal Bank Building
NEW YORK, 115 Broadway

Vol. V.

Publication Office : TORONTO, AUG. 1, 1911.

No. 15

THE STANDARD

COMPANY LIMITED
GENERAL OFFICES AND FACTORIES · PORT HOPE · CANADA

PLATE F.552

WE manufacture the most complete line of Sanitary Fixtures for public buildings, factories, barracks, schools, etc. Every combination is set up, adjusted, fitted and tested before leaving our works, and we will save you time and money by sending you complete roughing measurements on request.

BRANCH OFFICES AND SHOWROOMS

TORONTO 119 KING STREET EAST	MONTREAL 44 BEAVER HALL HILL	WINNIPEG 76 82 LOMBARD ST
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Beaver Brand

Cast Iron Enamel Ware

Noted for Good Color, Durability and Attractiveness



The above cut shows our Wall Lavatory—artistic, sanitary and durable.

One of our leading sellers. Our splendidly equipped plant is producing an unbeatable range of enameled Bath Tubs, Slop Sinks, Kitchen Sinks, Laundry Tubs, Lavatories, Closets, etc., and our customers can be sure of satisfactory goods promptly shipped. A guarantee goes with all Beaver Brand Enameled Ware.

Amherst Foundry Co., Ltd., Amherst, N.S.

ONTARIO SALES AGENT:

MONARCH BRASS MFG. CO., LTD., ¹⁷⁸⁻¹⁸⁰Victoria Street, TORONTO

MARITIME PROVINCES
All Jobbing Houses

MONTREAL, P.Q.
All Jobbing Houses

WINNIPEG, MAN.
E. B. Plewes, 120 Lombard St.

VANCOUVER, B.C.
A. O. Campbell

The Honeywell System OF HOT WATER HEATING

WAS ADOPTED IN THE YEAR 1910 IN
FORTY PER CENT.
OF TOTAL

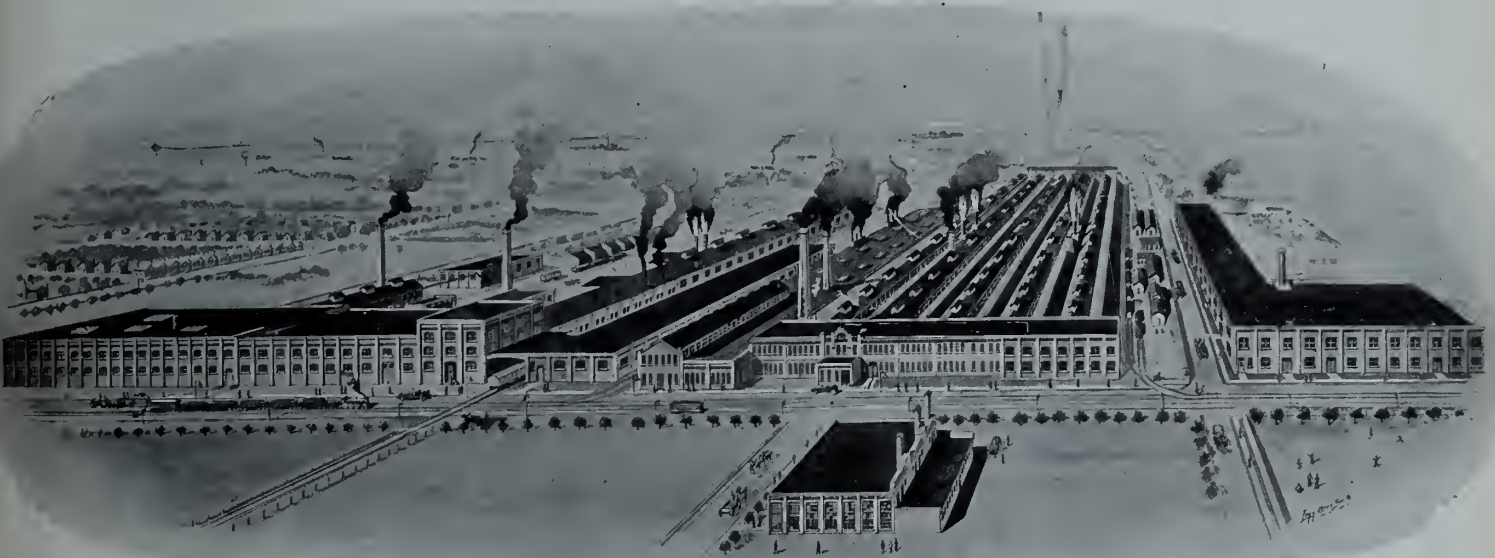
Hot Water Installations Throughout Canada

Upon no other point are Architects, Steamfitters and Proprietors so well agreed as on
the Merits of the Honeywell System.

The Honeywell Heating Specialty Company

Frank T. Rawley,
Manager for Canada

Room 1008 Eastern Townships Bank Bldg., Montreal.
Phone Main 4615



Malleable and Cast-iron-pipe Fittings

MANUFACTURED BY

FITTINGS LIMITED

OSHAWA

WINNIPEG

MONTREAL

Our 1911 Catalogue is now ready.

Does Advertising Pay?

ABOUT a year ago a firm ran a double-page advertisement for compressed air water service systems in Plumber and Steamfitter. We do not know what results they secured at the time, but a few days ago one of our subscribers in Yarmouth, N.S., recalled the advertisement but had forgotten the name of the advertiser and asked us if we could give them the address.

Had this been a circular instead of an advertisement the enquirer would have been at a loss how to trace up the name and address of the manufacturer.

This is not an isolated instance. We will furnish on request a dozen similar examples which have come to our attention during the past few months.

Any manufacturer or jobber who is anxious to familiarize the Canadian plumbers and steamfitters with the merits of their goods or with the service they are able to offer will find the advertising columns of Plumber and Steamfitter the most economical method they can use.

The results may not be seen immediately but if you tell your story in an interesting and convincing manner the trade will remember you when you are in the market for the line of goods you have to sell.

Write us for full information as to advertising rates and the thoroughness with which we cover the Canadian field.

Plumber and Steamfitter

and Sanitary Engineer of Canada

MONTREAL

TORONTO

WINNIPEG

IT RINGS TRUE,

Doesn't it, when a manufacturer says: "You can try my tools with no cost to yourself except letter postage."

An offer so fairly made should and does bring responses from plumbers and steamfitters everywhere. Men knowing tools as they do, figure that my tools must "have something" over other makes or I couldn't afford to keep my "Free Trial Offer" standing.

And They're Right

I DON'T MANUFACTURE STOCK GOODS. Every piece of work that goes out of the Nye plant has the impress of individuality upon it. My tools are not ordinary tools. THEY'RE DIFFERENT.

They are not different, however, without distinctive points of design and utility. Tradition has been discarded in designing Nye tools with resultant improvements that cannot fail to appeal to discriminating plumbers and steamfitters. THE "FREE TRIAL" offer applies to all NYE GOODS.

ALL I ASK IS YOUR TRIAL ORDER

NYE,
THE DIE MAN

The Nye Tool and Machine Works, 124 N. Jefferson St.,
CHICAGO, ILL.



History:

For the whole world we established the high standard of Chain Tool strength and do unfailingly sustain our claim for superiority.

Your pull, our pull and "Vulcan-Bijaw's" live on same basis—if not superior it couldn't hold.

In the matter of service we've doubled up on "Vulcan-Bijaw" pull!

The double-ended reversible jaws, easily turned when teeth

first in use become dull, assure the service of two tools at the price of one.

There's a full measure of economy in "Vulcan-Bijaws."

All sizes; each size equal to four pairs common tongs. See your dealer.

A POSTAL BRINGS LITERATURE

J. H. WILLIAMS & CO.

Superior Drop-Forged
Chain Pipe Tools

77 Richards St., BROOKLYN, N.Y.

WROUGHT PIPE

BLACK and GALVANIZED. SIZES, 1/8 IN. TO 4 IN.

All our pipe thoroughly inspected, tested to 600 lbs. hydraulic pressure and branded.

Ask your jobber for



Brand

CANADIAN TUBE & IRON CO., LIMITED

Montreal

Works: Lachine Canal

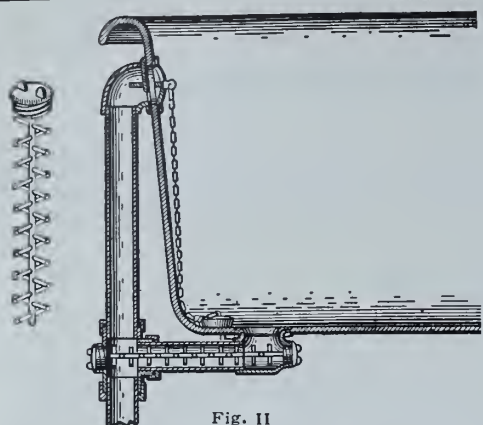


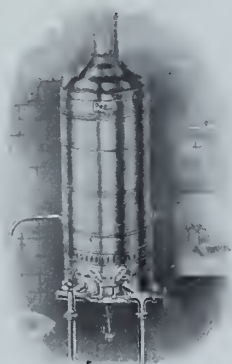
Fig. II
E.N.O. Patent Bath and Waste Overflow

SOMETHING NEW

Here is a Bath Waste and Overflow that can be thoroughly cleaned out from two outlets, viz: back of Bath or underneath. The Cleanout Rod, Fig. I, is made of aluminum, has a ball joint connection to the plug. All the fittings are of cast brass and heavily nickel plated. The whole is got up for use and will stand more abuse than any other Bath Waste in existence. Our patent can be used with any standard bath on the market.

SOLE CANADIAN MANUFACTURERS

Westport Mfg. & Plating Co., Limited
117½ BANK STREET, OTTAWA



JUST WHAT YOU'VE BEEN LOOKING FOR

Rapid
BATH HEATER

NEW MODEL "F."

This new "Rapid" Model "F" has a gas regulating device on gas valve so that gas pressure at each individual heater can be absolutely controlled. This is a new feature and guarantees perfect results. Put this new "Rapid" Model up by the side of any instantaneous bath heater on the market and watch results under any conditions.

SEND AT ONCE FOR COMPLETE CATALOG AND PRICES.

RAPID HEATER COMPANY
(INCORPORATED)
GRAND RAPIDS, MICH., U.S.A.

Don't Trust to Luck

YOU never yet knew a fatalist who was a success. The man who makes good is not the man who lets things happen but the man who makes things happen.

If you are a man with selling ability and have not full scope for it in your present situation, you can find an outlet by becoming the MacLean representative in your district.

The MacLean Publishing Company are the publishers of MacLean's Magazine, for which new and renewal subscriptions are needed. If you can secure them it will pay you well.

This need not interfere with your other work—unless you find, as many others have done, that it pays you to give your whole time to it.

The MacLean Publishing Company

143-149 University Avenue,

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Small Costs—Big Results

THE COST of a Want Ad. in Plumber and Steamfitter is estimated in CENTS.

THE RESULTS are figured in DOLLARS.

MASTER plumbers and steamfitters, supply men, manufacturers and travellers from VANCOUVER TO HALIFAX are consistent readers of PLUMBER and STEAMFITTER. This makes a Want Ad. in Plumber and Steamfitter the only satisfactory way to place your proposition before those most vitally interested.

WOULD YOU BUY OR SELL—A Typewriter—A Show-case—Set of Tools—Desk Secure a Traveller—Bookkeeper—Partner

Use a Plumber and Steamfitter Want Ad.

RATES: (Payable in advance)

2c. per word first insertion.

1c. per word subsequent insertions.

5c. extra per insertion for box number if desired.

Write or phone our nearest office.

**Plumber and Steamfitter
and Sanitary Engineer of Canada**

MONTREAL - TORONTO
WINNIPEG



Your customers are learning that there's more to a boiler than cast iron.

Your prospect of to-day isn't buying on anybody's "Say so."

He wants to be "shown"—he wants actual facts about the boiler you're offering him—and you and we can't afford to overlook this in trying to do business with him.

It is still true, of course, that an unprincipled salesman can muddle up a lot of his "book-learned" ideas, but if he visits three fitters, two of them are pretty likely to tell him the truth and crooked sales-talk is going to queer somebody.

That's one reason, it seems to us, why it ought to pay you to recommend the "King." Its selling points are all practical, truthful advantages—ones that are bound to appeal to any prospect, whether he is an expert in heating or just learning the a-b-c's of it.

When a man asks about the "King" Boiler, tell him candidly just what you think of it. The boiler will make good every reasonable claim you make for it—we take entire responsibility for that.



No. 3, High Base "King" Hot Water Boiler

SOME FEATURES OF THE KING BOILERS

- Easily operated side-lever Shaker.
- Patented grate connection—no split-pins or bolts.
- Corrugated lining in Firepot.
- Tapered smoke passages.
- "Twice-as-big" circulation-quickenning water openings.
- Close fitting, smoke and gas-tight doors.
- Generous combustion chambers.

STEEL AND RADIATION LIMITED,

TORONTO

Head Office : Fraser Ave.
Showrooms : 80 Adelaide E.

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Hot-water and Steam Boilers, Radiators, Pipe, Fittings, everything for the Steamfitter. Send us your Orders. We don't keep you waiting.

Plumber and Steamfitter and Sanitary Engineer of Canada

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Circulating amongst Plumbers,
Steam, Hot Water and Gas Fit-
ters, Sanitary Inspectors, Heating and
Ventilating Engineers, City Engineers,
Boards of Health, Architects, etc.

TORONTO, AUGUST 1, 1911

LETTERS and opinion from prominent members of the trade on the all-important question of ways and means to effect the change in name from "Plumber" to "Sanitary and Heating Engineer," are given in this issue.

CHANGING

NAME OF TRADE

The matter is one of such vital import that fullest and immediate attention should be given to it.

Many of the suggestions made in the course of the letters received are worthy of adoption.

The general opinion seems to be that, while the local associations should deal with the matter, each individual member of the trade should help along the good work in the many ways at his disposal. For instance, each man should change the name on his shop sign, on his letter heads, and in his advertising. By this means the public would gradually become acquainted with the change.

An admirable suggestion is made to the effect that the executive issue a certificate of membership to all entitled to same. This plan was adopted by the Ontario Society and will be put into effect during the coming year. Members in receipt of certificates would find it to their benefit to frame the same and hang it in their shops. A double advantage would be the opportunity thus presented of excluding incompetents. The proper method would be to issue certificates only to such as were thoroughly qualified to claim the title of "sanitary and heating engineer." Whether this should be determined by the passing of examinations is a point which would then arise. The solution would probably be in the appointment of paid provincial organizers, who could look after the conduction of examinations, in addition to their other duties.

The suggestion is also made that the preamble, explaining why the change is being made, which was adopted at the convention, should be sent to all the leading daily papers. As the preamble was adopted primarily with the object in view of acquainting the public with the facts, this step would appear to be a wise one. It is only through the medium of the daily press that the matter can be given the fullest publicity.

Another suggestion worthy of attention is to the effect that a general date should be set for the trade to make the change. If carried out, this plan would bring about concerted action and would have the advantage of focussing public attention more closely on the change and the reason for it.

Further correspondence is solicited on this question. Plumber and Steamfitter will gladly use any letters bearing thereon.

PUBLIC opinion is inclining more every day to the necessity for public regulation of slum life. It is felt that the conditions now existing in all large cities should not be tolerated. The unsanitary state of the homes of

REGULATION OF SLUM LIFE

the poor is the worst menace, not only to health, but to morality as well. Cleaner and healthier conditions would result in the purging

of much of the crime that is engendered in the swarming, disease-infested tenements and in raising the standard of life and citizenship among the denizens of these unhappy districts. Society owes it to itself, then, as well as to the unfortunates themselves, to see that something is done.

The problem is not an easy one to solve. In discussing the matter, the Montreal Gazette says:

"The growth in city population with the booming of land values and the raising of rents, works in the same way everywhere, driving families of small earning power first into tenements and then into rooms in tenements. In this the law of economy rules. The municipality can only compel cleanliness, first in connection with its own property and then in the premises of its inhabitants. Only cleanliness in such cases can preserve health."

There is considerable truth in the statement that over-crowding cannot be altogether prevented. The municipalities can compel cleanliness, however, and it should be seen to that such is done. The appointment of slum commissions in all good-sized cities would do much to eliminate this evil.

THE sanitary worker is gradually coming into his own. The splendid work that he has done in effecting a general improvement in sanitary conditions in the home is being recognized. No more telling tribute to the trade has been paid than the

A TRIBUTE TO THE TRADE

following article, which appeared in Collier's Weekly, in the June 17 issue :

"If all plumbers had a passion for diamonds and bought the best and largest that their incomes would afford, then the size of the stone on your plumber's shirt front would be a reliable barometer of the community's standard of hygiene. Where the friendless plumber is a prosperous and highly respected citizen the people of his neighborhood or village live in comfort in modern

houses, and usually understand first principles of healthful living. That was a wise culture centre which, instead of advertising itself as "the Athens of Southern Kansas," boasted of the number of its bath tubs and sleeping porches. For all his deliberate manners, short hours and incurable forgetfulness, the plumber has managed to accomplish a tremendous amount of useful labor. What a record of achievement he might have to his credit if he had worked all of the hours in which he was going back and forth from the shop after tools that he forgot to bring with him! It was only about twenty years ago that "completely modern" houses began to be the property of citizens of average means. In so progressive a State as Kansas a plumber in Salina twelve years or so ago was publicly derided when he exhibited a modern bath-room equipment in his front window. Now that same town is boasting of the amount of money it has invested in all sorts of plumbing."

THE day is not far off when plumbing examinations will be held in all parts of the country. This is inevitable. The public is gradually coming to realize the extreme importance of sanitary

EXAMINATIONS ARE NOW NECESSARY.

work and its bearing on health. It will not be long before the people insist that every care be taken to insure perfect work; and the necessity of maintaining a high standard of efficiency will then be realized. This can be done only by setting a standard up to which each man desirous of doing sanitary work will have to measure. No one would think it proper to let any man at all start up in the practice of medicine. The sanitary worker has nothing to do with the curing of disease, but he has a lot to do with the prevention of it, and it is, therefore necessary to stop incompetents from engaging in plumbing work.

Men who know their business need not fear a test. Members of the trade who have the best interests of all concerned at heart, favor the idea of examinations. It is to be hoped that the day is not far off when the idea is put into actual practice in every municipality in the country.

EXAMINATIONS are conducted in England, and have been for some time. A writer in a recent number of the Ironmonger points out the necessity of maintaining a strict standard. He says: "When the

KEEP UP THE STANDARD

movement for the registration of plumbers was first to set on foot it was generally admitted that the examinations were stiff enough to ensure that the candidates who passed were thoroughly competent. Of late years, however, the suspicion has been gaining ground that in order to rope in as many men as possible the examinations have become much less stringent, and it is even asserted in some quarters, I see, that numbers of the candidates admitted as duly qualified workmen by the National Registration of Plumbers (the organization which has taken the place of the Worshipful Company) are not nearly so competent as those who obtained the certificate of the Institute of Plumbers. Indeed one champion of the latter body has stated publicly that numbers of craftsmen have passed the local examinations and qualified for registration under the auspices of the National Registration authorities, who could no more pass the examination of the City and Guilds of London (which is necessary for admission to the Insti-

tute of Plumbers) than the B.A. examination of Oxford. The same writer declares that the lowering of the standard of efficiency has not resulted in attracting men in the numbers expected, and that consequently many of the local branches of the National Registration body are in a state of insolvency. How severe are the tests imposed by the examiners of the City and Guilds of London Institute may be judged from the fact that out of 3,210 students attending the plumbing classes only 939 sat for examination, and only 561 obtained certificates."

THE terrible fire which devastated Northern Ontario during the past week has taught some costly lessons, and one of the costliest is that fire insurance, however dear it may be, is an absolute necessity to a business man.

In the burned area, owing to the dense forests and the primitive nature of most of the buildings, a high insurance was demanded. **INSURANCE A NECESSITY** Ten per cent. was an ordinary premium, and only a small proportion of the inhabitants could be induced to place any insurance at this abnormal cost. They preferred to run the risk of loss rather than to pay for protection at this rate.

The great fire has burned out every place of business in several prosperous towns and many of these business men are ruined because they carried no insurance. This event proves the utter folly of trusting to luck in this matter. Every business man owes it to himself and to the firms with whom he does business to keep his buildings and stock well covered with insurance. The fact that the rate is high, simply furnishes an additional reason for securing the protection, because it means that the risk is also high. While insurance companies, in many cases, undoubtedly ask a higher rate than is reasonable, still the difference in their rates, in different places, is a pretty good indication of the relatively high risks.

SOLDER IS still "aviating." The high price of tin is keeping solder well up.

GENERAL REPORTS are to the effect that trade conditions are brisk in all parts of the country.

THE ONTARIO officers are "getting busy" bright and early. New local associations are being formed in a number of Ontario cities.

THE QUESTION BOX department is open to all. We will be glad to receive problems and enquiries from members of the trade at all times.

WESTERN MAN writes that he has more contracts on hand than he can possibly attend to and that he did not have to quote a cut price on one of them. Both quantity and quality.

"**TOO BUSY** to attend to correspondence," is the reply received from all quarters nowadays. When it is a matter pertaining to association work, members should always find the time somehow to answer letters.

PICNICS ARE now the order of the day. An event of this kind which is not afterward reported in Plumber and Steamfitter, with plenty of photographs, cannot be regarded as a complete success. See to it, therefore, that reports and photos are sent in to this office.

Steps To Be Taken in Changing Name of Trade

Opinions Secured From Various Members on This Important Question—It is Felt That Local Associations Should Get to Work—A General Date for Putting Change Into Effect is Suggested—Have a Membership Certificate — Treasurer Suggests That Dues be Paid at Once.

THE question uppermost in the minds of most of the members of the Canadian Society of Sanitary and Heating Engineers at the present time is the determining of steps to effect the change in name. That it will take some time to accustom the general public to the new name of "sanitary and heating engineers" instead of that of "plumber" is recognized by all and it is, therefore, important that the work should be commenced at once. The request made by Plumbers and Steamfitters for opinions on this subject has met with a ready response. A number of members have been interviewed on the subject and letters have been received from others, much light being thrown on the subject as a result.

Opinion of President.

When seen by the Montreal representative of Plumber and Steamfitter, President J. E. Walsh expressed himself as being in favor of immediate action on the part of local association. "This matter is surely a local affair," he declared, "and should be taken up by the various associations." He believed that it would be better for the associations to act rather than individual members, as concerted action would undoubtedly bring speedier and surer results. In places where there are no local associations, each man should act for himself and should proceed to work without delay.

President Walsh believes in immediate action. The sooner the change is made, the better it will be for everybody.

Must Amend Charter.

The Montreal Association was formed under a charter from the Province of Quebec and consequently this will have to be amended before any steps can be taken there.

Have Started the Work.

A number of firms have already started the campaign. Harry and Richard Mahoney of Guelph, who are in partnership, have changed their envelope forms in accordance with the change in name of the National and, just as soon as their billheads and stationery runs out, they will see that the change is made there also. "We intend to have our window sign read, 'Mahoney Bros., Sanitary and Heating Engineers' shortly," stated Harry Mahoney, to a representative of Plumber and Steamfitter.

Harry Mahoney believes that the work could be facilitated all over the country,

if the executive were to issue a circular advising all members of the trade of the change in name and making suggestions as to the means of bringing it into effect. He is also of the opinion that the preamble, adopted at the convention, which explains the reasons for the change, should be sent to all the leading newspapers for publication. "The idea of adopting the preamble was to let the general public know why we had taken the step," he states, "and the only way to do this was to let the daily newspapers give the necessary publicity."

Not All at Once.

Treasurer E. D. Higginbottom, Fort William, writes: "We think it would be much better for each member of the National Association to use his own judgment in the matter regarding the change of name. We do not think that this should be done by everybody at once, but work to it gradually. We think it would be better to educate the public gradually. So far as we are concerned, we are only using the title of 'Sanitary and Heating Engineers' in our advertising, but intend later to put it on our billheads, signs, etc. This is a very important matter and a lot of judgment should be exercised, otherwise there would be too many incompetents using a name to which they are not entitled.

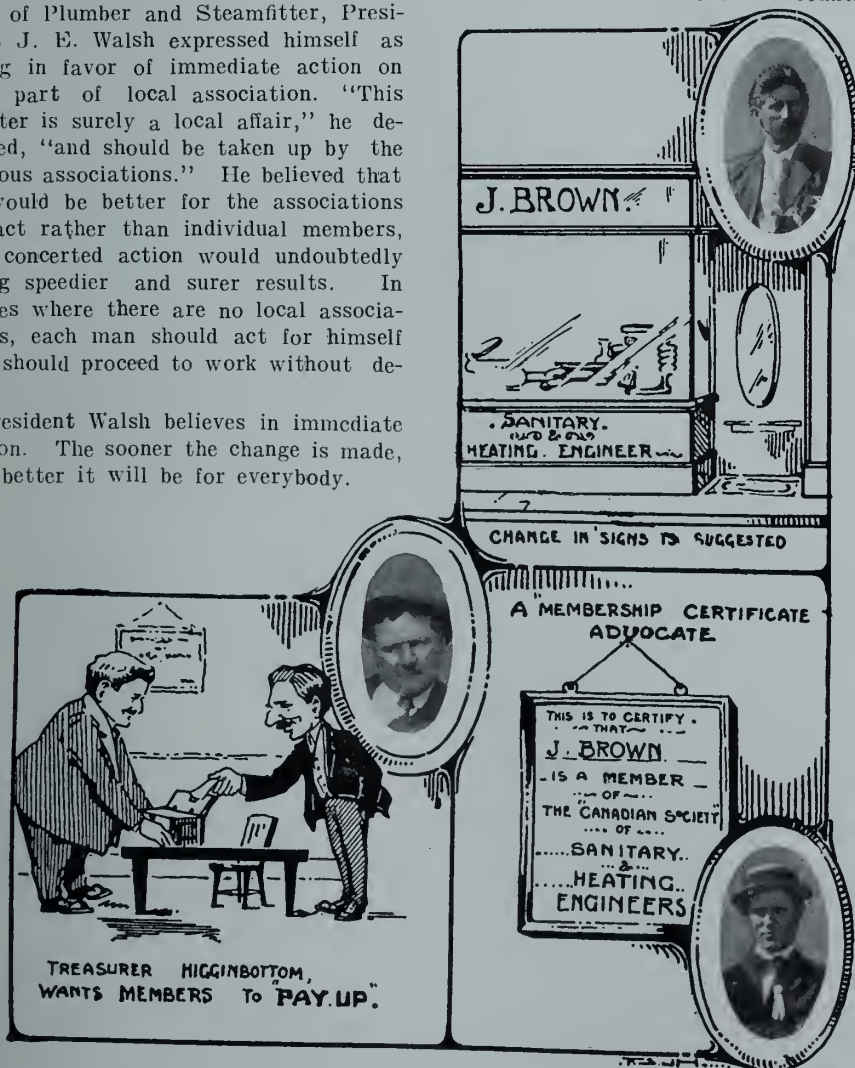
Pay Dues in Advance.

"There is another matter almost as important, if not quite so. In view of the fact that we are to have a paid secretary in the National Association, it would be advisable for all members of the Canadian Society of Sanitary and Heating Engineers to forward their dues to the undersigned with as little delay as possible so that we will have the wherewithal to reimburse the secretary for his services."

Shop Hanger for Members.

In the course of a letter to Plumber and Steamfitter, J. E. Farrell of North Bay makes the suggestion that the society get out a suitable hanger or certificate of membership to be sent out to all members. Mr. Farrell writes:

"In order to firmly establish the name recently adopted for the trade, each member of the trade should at his earliest convenience re-arrange his shop sign, also the heading on all stationery. On the latter the statement 'Member of the Canadian Society of Sanitary and Heating Engineers,' might be added with good effect.



Suggestions advanced by prominent members as to best means of bringing about the change in name.

"It seems to me that it would be advantageous to the members of the association if a neat, well gotten up hanger was gotten out, stating that the individual or firm of the shop in which it was hung was a member of the Canadian Society of Sanitary and Heating Engineers. These might be provided by our national secretary, and sent out at cost, or if not too expensive, they might be sent out upon receipt of this year's per capita tax paid in advance.

"It seems to me that a continuous and steady effort of all the trade from the executive down should be made to educate the public that we are Sanitary and Heating Engineers."

Set a Date for a Change.

This is the leading suggestion contained in a letter from Jos. W. Barnes, Port Arthur. Mr. Barnes writes:

"I believe the matter should be taken up by all the associations and put into effect at once. All new printing or stationary or printing of any kind should be made up in the new form this year and, if rigs or signs are to be re-lettered, I think the new name should be put on.

RETURN IN FIVE DAYS TO

Mahoney Brothers
Sanitary and Heating Engineers

69 QUEBEC STREET WEST
GUELPH, ONT.

New envelope form used by Mahoney Bros, Guelph.

"I also think that the provincial association should set a date when all shops will go under the new name, giving each shop ample time to prepare for the change. The sooner the public is educated to the change, the better it will be for all concerned. It will be misleading to quite a number for a while and will not be understood as the word "plumber" has been in use for so many years. The sooner all the plumbers throughout the country recognize the new name, the sooner the plumbing business will take a big jump in the right direction."

A meeting of the Port Arthur Association is to be held shortly, when the question of setting a date for the general change there will be taken up.

A First Step.

Lewis McGrow, of Toronto, who is vice-president for Ontario this year, suggests that the change should be effected by degrees. As a first step he thinks it would be advisable for members to put on their bill heads, letter paper, etc., the words "Member of Canadian Society of Sanitary and Heating Engi-



A group of Toronto, Montreal and Soo members on the upper deck of the S.S. "Kewatin," passing Thunder Cape.

neers" in brackets, after the firm name. Gradually, as the public become accustomed to the new name, the change could be made in its entirety.

NOTIFICATIONS SENT OUT.

Secretary Watson has sent out a notice to each officer of his election with a request that each supply him with a list of all master plumbers, architects, supply houses, etc., in their province.

General Buildings.

A flour and grist mill is proposed at Qu'Appelle, Sask.

The merchants Bank will erect a \$75,000 building at Halifax.

Plans are being prepared for a saw-mill (45,000 capacity) at Ladner, B.C.

Plans are in progress for a \$12,000 store for Walton Bros. at Bradenburg, Sask.

The winter Fair building at Guelph is to be revised. A big addition is also planned.

An extension to the factory of the Canada Car Co., at Amherst, N.S., is reported to be likely.

A canning factory is to be built at Aylesford, N.S. It will be built this fall or early in spring.

Tenders are being called for the erection of a \$100,000 hotel at Edmonton for the Northern Hotel Co.

Municipal Undertakings.

A by-law will be submitted on Aug. 5, at Gravenhurst, Ont., for the raising of \$7,000 to erect a steel water tank.

The ratepayers of Sudbury, Ont., are voting on a by-law to raise the sum of \$15,000 for an extension of the water-works.

Public Buildings.

Two new fire stations are proposed at Vancouver.

A new post office is to be built at Tilbury, Ont.

A \$13,000 library building is to be erected at Pembroke, Ont.

Plans are being prepared for a new theatre at Revelstoke, B.C.

Tenders are being called for a new \$15,000 school at Chippewa, Ont.

A new post office and government building is planned for Revelstoke, B.C.

The trustees of the Hume School, Nelson, B.C., are contemplating an addition.

A \$125,000 addition to the Vancouver high school has been decided upon. Plans are being called.

A new Y.W.C.A. building is to be erected at New Westminster, B.C. The basement will be put in this year.

The Y.M.C.A. directors at Galt, Ont., have decided to purchase the Grand Hotel property as a site for a new building.

A new wing is to be built to the penitentiary at New Westminster, B.C. It will accommodate about 260 more prisoners.

An addition to cost \$80,000 is contemplated at Whitby College. The new part will comprise three storeys and basement, with a gymnasium.

The Athletic Club, Nanaimo, B.C., are planning a \$15,000 extension. The proposed accommodation includes swimming tanks, turkish baths, gymnasium, etc.

A by-law is being voted upon by ratepayers of Hamilton, Ont., to raise \$228,733 to purchase property adjoining the city hospital. It is intended to erect an addition to the building.

Part the Trade Has Played in Sanitary Improvements

A Paper Read Before United States Convention, Showing the Advance of Organized Work and the Improvements in Home Conditions Effected by Plumbers
—A Resume of the Change in Materials.

THE following paper was presented by David Whiteford, Chicago, at the 29th annual convention of the Master Plumbers of America:

It is said that when Dr. Johnson first heard of Boswell's intention to write his biography, he announced with decision that if he thought Boswell really meant to write his life, he would prevent it by taking Boswell's.

It is not my intention to write a book on the life of the Master Plumbers' Association throughout the country, nor of the National Association of Master Plumbers of the United States, but only to say a few words about them while alive and not like the great Egyptian kings, who were all tried after death before they could be embalmed.

In the year of 1881, as I remember, the New York employing plumbers organized themselves into an association of master plumbers. This was the first association formed in the United States which was of any consequence, and it became a centre of motive power. The next cities to fall in line were Chicago and St. Louis and the others followed. I ought to say that the employing plumbers of Chicago formed an association in 1863, but it was not of long duration.

To New York City, then, must be given credit for the initial movement, which resulted in a convention being held in that city in 1882, twenty-nine years ago. To-day we can still say: "They builded better than they knew," as has been evidenced year after year in the annual gatherings, growing greater and greater, until this has become the strongest and most important factor among trade associations in influence and efficiency for health measures. Who can estimate the value of the work done and the results obtained? That which has been done is indelibly stamped on the record of our trade-industry, and to it may be traced every step of the way up to the present high standard of plumbing and drainage conditions.

What was the origin or need for the Master Plumbers' Association? Had there been revealed any new opportunities for usefulness, or was the public making new demands for better service? No, it was the gradual awakening that came to the more intelligent and progressive members of the craft—a vision that the true conception of their relation to public health and safety had not been realized.

To my mind, just at this time and coincident with the association movement, there was another agency at work to overthrow the prerogatives of the plumber as a manufacturer and distributor of the goods he made, and perhaps it was well that there was, for the plumbers as a body were loth to give up old ways for new. Out of this struggle came a new order of things. Lead pipes gave away to iron; the pan-water closet gave way to plunger and hopper, and the plumber who also made traps, bends, street washers and tanks became only a memory.

In this new division of the plumbing business, new problems of a complex nature arose as to the rights of the manufacturers, irrespective of those whose business it had been to sell to customers directly, regardless of any trade protection whatever. This in itself was one of the potent factors for the unification of employing plumbers, as a contest had to be waged for self preservation and a victory won. This was secured at the national convention held in Baltimore by the adoption of a resolution for trade protection, now known as the Baltimore resolution. This is one of the way-marks which can never be blotted out. Through the earnest and constant insistence of the national association a working understanding was consummated, and such relations established between the manufacturers and the master plumbers as to secure to the latter reasonable profit on goods handled.

In the beginning of this new epoch our association had to meet many new conditions and problems, among which the subject of sewer gas was of paramount interest. In Europe and America public sentiment had been so aroused to the danger from unsanitary installations that plumbers came very near being ostracized from society as a result of the new propaganda. But plumbers themselves have never questioned that bad plumbing is a means of spreading diseases, and that there was cause for anxiety at a time when both material and methods were crude and defective. It has been the aim and purpose of the leaders in the trade to correct all errors in theory and practice, regardless of the sanction apparently given by long continued custom on the part of those who were not aware that they were not transgressing any law of nature or endangering public health.

The rise of our trade, or business, or

profession, whichever name best fits our standing in various communities, has been rapid. The task we imposed upon ourselves we have accomplished, at least to a high degree, as is seen in the evolution of trade practice in the planning of systems and in quality of material. In the changes that have taken place, iron has succeeded lead for soil and waste pipes, and for supply pipes, and seems at present best suited for such use. Venting and re-venting as now practiced seem to the trade essential features for air-purification and protection of traps against syphonage. It is not our intention to enter into any details of construction or amplify by any criticisms on these subjects, but simply to call attention to the difference in practice now from what was considered years ago.

There is a growing disposition on the part of sanitary engineers and plumbers to look for material for soil and waste pipes which will have strength without so much liability to decay, and of which the joints also can be used. I am inclined to the idea that lead may again be brought into use for these purposes, but understand that I am not stating it as a fact. I have had long experiences with both lead and iron. I have removed lead soil pipes thirty years after installation and found them in good condition, and I have removed iron soil pipes, standard pipes, in twenty years and found them full of holes.

The weak point in lead pipe was that it was too light, and that the joints were defective. The pipe should be 3-16 inch thick, with brass tees tinned on the inside, and upper and lower ends of the lead soil pipe resting on inside flange projections soldered in place. The fittings for ventilation purposes in connection with fixtures should also be brass, and all other connections made with the usual wiped joint, all of the branch and main pipes of wastes being of strong lead. I know that when we have had unsatisfactory experience it is customary not to run risks again, but great results are only obtained by keeping everlastingly at it until success is assured.

The national and local association, in their work for the elevation of the art and science of plumbing and the uplift of the profession, have never neglected to encourage invention and improvement and new and modern ideas in regard to plumbing fixtures and other sanitary appliances, but they examine all such

carefully, accepting the good and rejecting or refusing to sanction that which does not appeal to the judgment of experts.

Our associations have not been instrumental in the creation of health departments, through the energy and spirit they put into their work.

Early in our history the question of legislation arose, and it is needless for me to take up in detail what points were involved, as very well informed plumbers know that they must conform to the provisions of the various plumbing codes so generally adopted by all progressive cities and towns now. It may be that in our zeal for law and enactment of stringent regulations, there is danger of going further than facts warrant. We do not know where we stand in regard to many problems, which must be solved by practical tests before we can formulate positive conclusions.

The national association, through the work of its sanitary committee under Chairman David Craig, has done perhaps more than any other agency to convince us that more investigation is essential in regard to ventilation of traps, syphonage and trap pressures, and also what organic substances contained in sewer air are deleterious to human life. This is where the rigid rules in our plumbing codes should be carefully considered. There is a movement on foot to determine mathematically the size of soil and waste pipes, and how many fixtures of various kinds should be allowed on a pipe of given size. There is also danger in breaking the continuity of a given size of pipe by abrupt terminations, thus spoiling the integral smoothness of the inside of the pipe. In other words, it is proposed to put the system under rules such as gas companies use.

As one of the dominant principles of our associations is not to claim an exclusive right to the field of plumbing sanitation, we invite with pleasure and welcome to our work all who can cooperate with us. Both parties gain thus.

Many manufacturers of plumbing goods deserve the highest praise for producing such beautiful and sanitary fixtures.

The Master Plumbers' Association invite to their fellowship, I am sure, the plumbing inspectors and sanitary engineers of all societies. We have seen reports from such bodies which should make us envious of the good work they are doing and of the trade papers full of instruction which is prepared and read at their meetings.

As we are living in an age of social science uplift and extension and private philanthropy and governmental economics, it would be well for our money in-

terests to consider the welfare of our poorer citizens. In Chicago there has just closed a "Child Welfare Exhibit," visited by thousands, which was declared a great success. This was, in my opinion, an act in the right direction. The rich are pouring out their wealth liberally in many channels to aid the unfortunate, but it seems to me that no call is more imperative than that which comes from the appalling unsanitary homes of the poor. It is the duty of the master plumbers to herald abroad this propaganda—to impress so forcibly that it cannot be overlooked that it will cost the municipality and private charity less money to build sanitary homes where little sickness will be found, than to alleviate the suffering caused by present terrible conditions.

In conclusion, let me say that it is a shame the press has done so little in spreading the gospel of health. While the deliberations of our last national convention were being held in Chicago, the papers made but little mention of our meeting. What we were doing was not sensational enough for them. Yet it was a duty they owed the public, to let the public know that thousands of dollars were being spent for their benefit. We crave not publicity, but we regret that our work seems to be so little understood and appreciated.

All praise to our trade papers, which have ably supported us in all our work since our birth as an organization. Our influence throughout the country would have been greatly curtailed had it not been for their powerful assistance.

The Sanitary Census Progressing in Ottawa

Ottawa, July 25.—The fact that only 2,000 of the 18,000 homes of Ottawa have yet been visited by the sanitary inspectors, shows that the work is a much greater undertaking than was supposed by many people at its beginning. Even some town fathers had no more accurate idea of the work involved in a city-wide hygienic survey than to try to block the appointment of suitable inspectors by having the electric light men combine their regular vocation with this little "extra." Only to the timely insistence of Dr. Sherriff, the Medical Health Officer on properly qualified sanitary inspectors does the city owe whatever good will comes out of the health census. And that many places have been found destitute alike of the meaning and the means of simple sanitation proves that this work was not begun too soon.

This kind of inspection is quite the vogue just now among Canadian cities. It is recognized that the first thing to be done in the cure of the ills which menace municipal life is to find out what the disease really is. First the disease, then the remedy.

Montreal and Toronto have just completed similar introspections. Astounding and appalling conditions were found in each city, and of a character considerably more aggravated than even the social workers could readily believe. The demon of the slum was found crouching in his lair, a surprise to nearly every citizen.

The time to attack unwholesome conditions of living is at the start and before a slum exists. Ottawa's health census should be made the preliminary to a drastic civic housecleaning.

GIVEN ARM CHAIR.

An arm chair was presented to Wm. Burns, of the Canadian Brass Co., by

the employes of the company, to mark his entrance into the ranks of the beneficiaries.

MUNICIPAL STEAM HEATING PLANT.

Stratford, Ont., July 19.—A central steam heating plant to be owned and operated by the municipality is the proposition recently made to the Stratford Light and Heat Commission, by S. L. Davis, representing the Canadian H. W. Johns-Manville Co. In this connection Mr. Davis proposes that the necessary steam be procured from the reserve boilers at the city lighting plant.

While Stratford now takes its power from the Hydro-Electric commission, the old steam boilers previously used have been retained for emergency purposes. Mr. Davis proposes to utilize steam from these boilers (using only the exhaust when the boilers are in use for power production purposes) as a means of heating the adjoining business area. He estimates that the present boilers, without any improvement or reinforcement, could supply steam for five or six blocks, and that thereby stores and offices could obtain heat in winter at a less cost than by installing separate heating systems.

A CORRECTION.

In a recent issue it was stated that Glassford Bros. & Co. were the Montreal managers of Twyford's, Ltd. It should have been stated that Twyford's, Limited, have showrooms in Montreal at 16 University St., and that A. W. Glassford is the Canadian manager.



POINTS ON HEATING

By
CHAS. H. DENISON



Chapter 11.

The job which I shall describe in this chapter was installed in a small city in the eastern part of the United States about twenty-five years ago. The reason that I call attention to it now is because this same job is still working just as good as it did when first put in and that, in all these years, there have been no repairs at all to speak of, other than an occasional water glass or the rubber diaphragms in the automatic draft regulator. Few of the steam heating jobs that I have put in, or had a chance to observe, have ever "had anything" on this particular job.

One morning in the early spring time I chanced to be riding on a certain railroad train bound for a place some distance from home. The day was raw and cold and an unpleasant drizzling rain was falling outside. After the conductor had taken up the tickets he came and sat down in the smoker seat just ahead of me, and, after awhile turned around and began to talk. "I hate to think of sitting around the home to-night," he remarked, "for we have taken all the stoves down and it will be colder than a barn."

"Why don't you have a steam job in the house?" I asked. It would not break you and then you could have a fire any day in the year that you wished. The job could be put in in less than a week's time, in an ordinary house and you would hardly know that the men were in the house. "About what would it cost?" he inquired. "That is hard to say, exactly," I replied. "The best way is to measure up the rooms and then figure it up, and then one can tell just exactly what the cost will be." "Are you going to stop in Hornville?" he asked. "I can, if you wish," was the answer. "Well then, suppose that you come up and see me this evening. I live at 711 East Sixth street," he said.

So I dropped off at Hornville when we arrived, and about seven in the evening I called at the conductor's home which I found to be well built. We proceed-

ed to look the house over from top to bottom, getting the measurements of the different rooms as we went from room to room and then I took my leave, for it is not a good plan to figure the job out right in front of a customer's face. I fixed it so that I would see the conductor the day following, but one, and then had the job down in black and white for reference. We did not think so much about "contracts" in those days, and I may say that in nearly all the jobs that I afterwards put in there in that city, I seldom had a contract. It is not a wise plan, however, as I sometimes got into a mix up before the job was settled. This job called, as I remember it, for about 250 feet of radiation to which I put an 18 in. round boiler, which was bricked in with a double wall, having a hollow or dead air space between the two walls.

At this time there were several good steam jobs in that small city and they were all on the two pipe plan. This job was about the tenth one that I had put in on the one pipe plan, which was somewhat of a curiosity at that time. Indeed, some of the fitters in that town claimed that a one-pipe steam job simply could not work and deliver the goods.

Just the same, I put said work in on that plan and went them one better as I had the steam return against the flow of the steam. The cellar was shy on vertical space and the best "pitch" that could be obtained was about one-quarter of an inch in ten feet. I remember this fact quite well as I had some doubts, myself, as to how the job was going to perform under these circumstances, but thought that I would take the chances. I may say, now, that it worked to perfection and there was never a kick or any hammering whatever. Ordinary pipe hangers were dispensed with, bailed hay wire being used instead. The pipe covering was composed of paper. Two thicknesses of asbestos paper wound on and held in place by string and over this was wound some heavy carpet paper also string bound. I know that some of the things about this job will sound

rather strange to the latter day fitter, but I am telling the thing as it was. It was an eight room house and we were not more than five days in cleaning up the entire job. We worked, however, and did not just seek to "put in" the time, and were ready to fire up just as soon as the last radiator was "hooked up."

That job showed up well. There was not but one small leak on it which was quickly stopped up by caulking and then all was tight. The radiators bronzed next and then the pipes covered and we were ready to move out. I do not recall that we damaged a single thing and remember that the lady of the house said that we gave no trouble at all and left the rooms as clean as we found them. This same lady was quite successful in influencing other housewives in our favor later on, as many of the plumbers and fitters in that town had acquired a bad name for wrecking the houses that they got into (by mischance).

This job was a success, always has so continued and is, to-day, doing its duty fully as well as the day that it was put in. The man who owned it, made it a point to care for same in a most careful manner, to which a large measure of its long usefulness may be attributed. He did more than care for the job, however, for he was so well pleased that he got other conductors, trainmen and engineers on the same railroad interested in the work and from the bunch of them I got fully forty steam jobs in something less than the next eight years.

He told that he burned less coal in the boiler than he had used in the two heating stoves that he had formerly used to warm his house, and from the coal bills that he saved to show, it seemed that he spoke the truth.

I have observed this job under all kinds of weather and conditions and have never saw a time when it fell down; from which may be seen that, in the old days there were some fitters who could put in work that would stand the test of time.



The Question Box



Subscribers are Urged to Send Questions to be Answered, or to Comment on Letters Published. Descriptions of Jobs Done or Shop Kinks are Also Invited.

HOT WATER SUPPLY SOMEWHAT SCARCE.

Editor Plumber and Steamfitter.—Am sending a drawing of a job of range boiler connecting that does not seem to get results. It is supplied from a tank located in the attic and we get very little

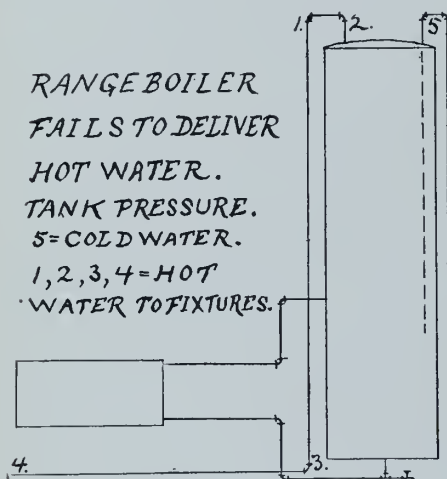


Figure 1.

hot water. Can you suggest any changes?

Winnipeg, July 21. John Duellier.

In Figure 1, the supply of cold water enters the range boiler at point 5. The hot water is taken to the various fixtures through pipe numbered 1, 2, 3 and

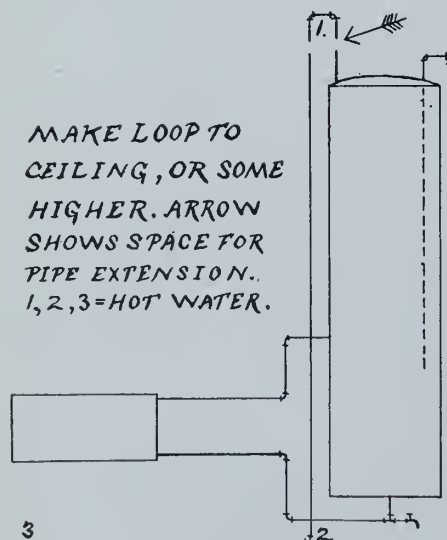
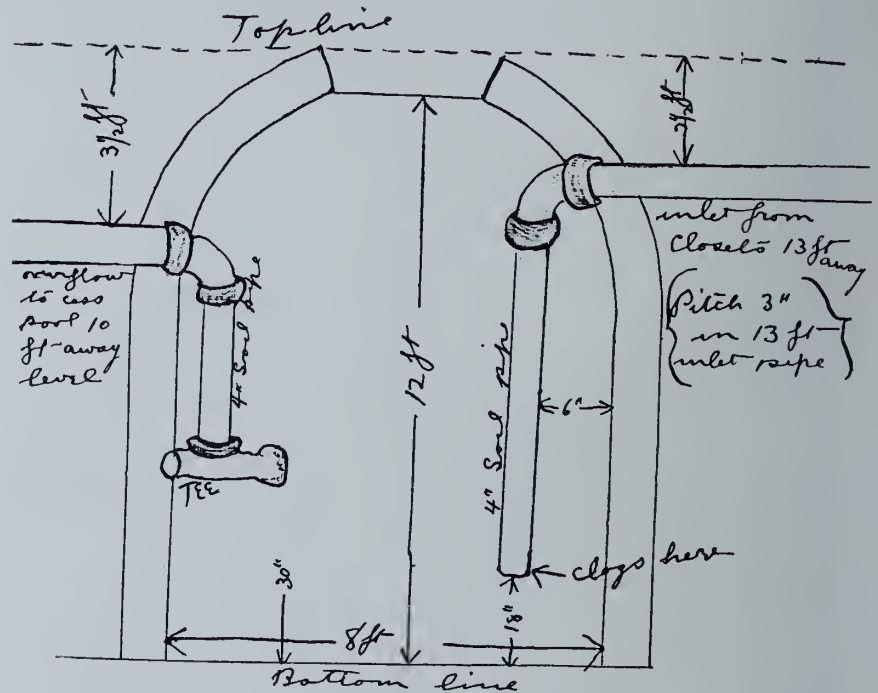


Figure 2.

4. This, the subscriber states, does not give satisfactory results. We presume that if he had city pressure, instead of tank pressure, that the hot water would

The clogging of the inlet pipe means the pumping out of the tank every three months, an unnecessary expense.

Are there any faults in the arrange-



Drawing of septic tank as it now stands.

come, after awhile, granting that said city pressure was reasonably strong.

In Figure 2, we have shown a loop (at point 1) which should be run quite high. This would be better if it were made a circulating job and could be accomplished by dropping the hot water pipe into the supply to the water front at the point where the lines cross, near figure two in the second drawing and taking the lines to the fixtures off at a convenient point, as the drop pipe need not, necessarily, descend directly as shown. —D.C.H.

DOMED SHAPED SEPTIC TANK.

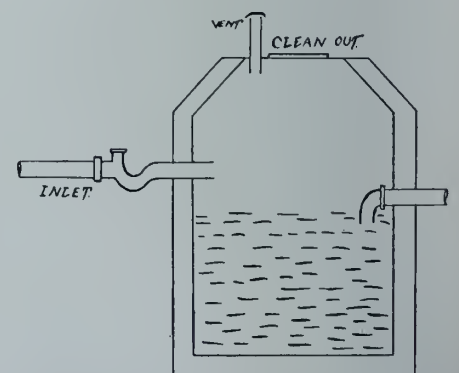
Editor Plumber and Steamfitter.—Enclosed find rough sketch of a dome-shaped brick septic tank, the working of which is an exception to the ordinary.

The heavy matter does not and will not float, but lays in the bottom until the inlet becomes clogged. Water on top is clear and odorless.

ment of the pipes, or what causes the heavy matter to stay at the bottom?

In other tanks the heavy matter floats and the water is syphoned off through the overflow. One tank for a large hotel here in town has not had to be opened or cleaned for nearly two years.

(Continued on page 20.)



A suggestion for improvement of septic tank.

Taking Care of the Workshop and Tools

Ideas for Proper Storing and Caring of Tools—Workshop Should be Kept in Clean Condition—Methodical System of Management is Necessary.

THE following instructive article appeared in "Plumbing and Lighting":

There is no reason why tools, from those of a workman's kit to the more elaborate plant of the fully-equipped shop, should not be carefully selected, and afterwards well taken care of. A little extra trouble in this direction will amply repay the master plumber. Good tools not only do better work than inferior ones, but reduce the time taken over it. Remember that, just as the master plumber must attend to his other duties, so should he give at least a little attention to his plant and tools, for even the best if them, when neglected, have a habit of falling into a state of rust and decay. It is also important that workmen should be able to place their hands directly on the tools they may require, and not interrupt their jobs to look for them. That being so, have a place for tools and try to keep them in their places. The plumber's workshop should not be untidy, for it lends itself to law and order just as much as any other workroom, and if planned with judgment, it is infinitely more attractive.

Three things are essential—plenty of light, a good broom, and a willing boy behind it. As before mentioned, have a place for everything and see that the shop-boy knocks off his odd jobs each evening in time to place things in their respective positions, and to give an extra good clean-up on Saturday.

Even though there be a shop foreman, the master should make it part of his systematic duties to glance over his plant, note its condition, and enquire as to the whereabouts of any missing article.

These suggestions may appear impossible, but it is not so. If a tool's position is detected vacant, ask the boy, whose duty it is to look after the tools, what job they have gone to.

A good system in the workshop is absolutely indispensable, chiefly because operatives, even first-class tradesmen, cannot be regarded as business men. Too many seem to nourish a feeling of contempt for what they consider to be mere business trifles. They do their work, but to them all else is sheer waste of time. Instal a system of order and tidiness, and gradually you will note that the workmen, too, will take an increasing interest in its maintenance.

A good plan is to have representations of the tools painted on the wall where they hang. A glance now and again will

enable a constant check on them to be kept.

It is understood that operatives find their own working kit, but nevertheless a shop kit should be provided, and under no circumstances must these be allowed to leave the workshop.

Tools of different class may be kept on different boards, or a better plan still is to make a cupboard out of $\frac{3}{4}$ in. T. and G. flooring. Here the water, lead-work, tinsmith, copper work and general tools can be arranged inside, the lighter ones being hung on the doors. A cupboard of this description will keep the tools clean, and under better control, as the workman can see the tool he requires at a glance, and obtain it quickly without turning over a host of others to get at it.

If it is not convenient to have a cupboard, fix a board of some sort, as large as possible, on the wall, and any little time and trouble taken in arranging the tools will be amply repaid.

Care of Tools.

A word about the care of tools: The best plan is to oil them, not over the dirt, wipe that off first, and don't spare the and spoil the tool, especially if it is rusty. It is only fair to the operatives that a bin in which they can keep odd tools when not in use under lock and key, should be provided, otherwise when men are out on jobs the tools they leave in the shop are apt to get knocked about or to go astray. Nothing arouses the ire of a good workman more than this, for the man who does not mind his leadwork dresser being used on sheet iron, can be placed to advantage on burst pipes. Wiping cloths have a habit of getting holes burnt in them. The handles of soldering irons go astray, and bits are missed from the blow-pipe box, and the average result is much bad language and strained feelings between the men, while the shop boy—if he values his hide—does not open his mouth.

As time goes on, it is astonishing how the plant of a well-managed establishment increases. Of course the plant will vary according to the district in which the plant is located. The plants of some shops may embrace tools for sheet metal work, such as rollers, folders, wiring machines, stakes and special hammers. All these should be protected by being wiped nightly with an oily rag and covered with a metal cap.

Then, in a jobbing shop, a drilling machine or a small metal turning lathe is often found and these possess good profit-earning powers. A fair supply

of carpentering tools is also indispensable to a jobbing business. All these must be treated with care and attention.

Before leaving the workshop it might be well to mention that gas as a fuel for heating soldering irons, melting metal, brazing and other purposes is a vast improvement on the take-a-long-while-to-light-up style of smoky fire-pot.

Many awkward and cumbersome tools such as picks, shavels, rope and tackle, etc., should be kept in an outside shed. They should be kept in a space located for their special use, and a list posted up near by so that they can be checked occasionally. The place set apart for fire-pots should be away from wooden buildings, for fire-pots, supposed to have been extinguished, have been known to re-ignite the charcoal and set fire to adjoining wooden walls. Ladders must be kept well painted to prevent decay. To have ladders that will join together is very convenient for several reasons, but the present day, safety extension ladders, are a great improvement on the old method of jointing together. No up-to-date jobbing-shop should be without them, for often one of these will save the carting of three ladders of different lengths to a job.

As before mentioned, a plumbing business grows like a tree. New twigs keep shooting out, and eventually develop into branches; and all these branches must receive attention from the office. New plant must be provided and old plant kept in order. Unless operatives are provided with good tools, they cannot turn out their work either well or cheaply. Especially does this bear on stocks and dies. Why it should be necessary to drum this in is hard to understand, for good cutting dies can be purchased cheaply enough now.

These remarks on planning for the future and keeping up a good equipment will not be appreciated by the man who is an operative to-day and a master every other month. He does not understand that if labor only is charged for the customer is receiving undue benefit, nothing being charged for use of plant.

The reason that so many plumbers' shops possess poor equipment is that they are simply starved—starved right out, and in many cases nothing remains but worn and out-of-date, rusty old tools.

Most emphatically should masters add a fair addition per hour to every operative's time for interest on capital, maintenance, and depreciation. Otherwise, he is losing the ordinary profits of a busi-

ness man. Stagnation of business usually follows, for you cannot compete against the man who keeps his plant right up-to-date. Nor is it fair to, yourself to throw in your own labor in order to make up these uncharged-for items and neglect other duties. Better to see that every item pays for itself and more. Use your own time in seeing that it does, or finding out why it does not. Waste no energy, make things pay or make a change. Don't go beating the air and try to be master, man, laborer, horse and cart, debt collector, and clerk all in one. You are out to run a plumbing business. See that you, while running that intricate concern make at least more than any unskilled shopkeeper.

A twelve-month may not give a man much time to prove that he is a business man, but it will give him long enough to know whether he could make more money working with the tools for another boss. A couple of years is not long enough to serve with the tools, but it has been long enough for some men to have confidence enough in their business ability to pose as masters, and make profit, too.

When three days on full pay as journeymen would earn them the sack, rising plumbers cannot afford to despise business methods and let those who have the cheek of Old Nick and the hide of a rhinoceros get into the running.

distinctly a palliative method of attacking disease and it is the remedial method I want more especially to bring before your notice.

There is no one in their right mind who would not rather avoid disease altogether, than be healed of it by the most skillful physician; for this and other evident reasons prevention must take precedent over cure.

Presentive measure may be divided into two classes, those dealing with the physical well-being and resistance of the individual and secondly, those having special reference to the environmental conditions, or affecting many persons or communities. It is with the environmental conditions that we have more especially to deal, and it is in connection with out-dwellings and public buildings that the plumber is called upon to do his part in the unceasing warfare against disease.

Plumbing has been defined as the art of placing in buildings the pipes and other apparatus for introducing water and removing the foul wastes. This should be the primary consideration in a building instead of as is only too often the case the last. One of the worst dangers of unsanitary plumbing is the escape into the building of sewer gas or air, from defective pipes, fixtures or faulty workmanship. It is an insidious thing attacking us at all times without our knowledge and its greatest danger lies in the fact that it lowers our vitality and bodily resistance, and prepares the way as it were for the disease germ in whatever form it may come. Nature herself has provided us with powerful weapons to fight the deadly microbe, but if our vitality is lowered the bodily resistance is weak and we fall easy victims to disease. It is also of the utmost importance that the right kind of fixtures be used, provided with an adequate supply of water and effective flushing appliances, for typhoid and cholera bacilli are sometimes present in fecal matter and there is danger from this source.

It is for these reasons that public health boards, corporations, state and national governing bodies are seeking to educate and increase the efficiency of the men entrusted with the installation of this work in our home and public buildings.

Gas for St. Thomas.

The Medina Natural Gas Company is asking for an entrance to St. Thomas. The company has secured an agreement with Aylmer to supply the town's needs, and coming so close to St. Thomas with gas to burn by the million the company will endeavor to make satisfactory arrangements with the city.

Plumbing Examinations Conducted at Port Arthur

Quite a Number of Candidates Appear Before Board—An Able Statement of Reasons Why Examinations are Now Necessary—High Standard of Efficiency Must be Maintained.

Port Arthur, July 25.—A series of plumbing examinations has been held here in the Mayor's office; in accordance with the provisions of the civic by-law. At the first examination, nine candidates appeared and at the second eleven. More examinations will be conducted shortly.

The examining board consisted of Charles Vincent, W. B. Sime and Hugh McRae, representing the city, the master plumbers and the journeymen plumbers respectively.

The work of the examining board is to see that those desiring to enter the business are thoroughly competent. A man cannot take out a license for plumbing work until he has appeared before the board and been pronounced a competent man to undertake sanitary work.

Necessity for Examinations.

The following reasons are given by plumbing inspector C. J. Vincent of Port Arthur, why the examinations are held:

The plumber of to-day is no longer literally a worker in lead. The improvements in workmanship, material and systems of installation have so changed the character of plumbing, that new standards of comparison are required to determine the quality of work. Whereas formerly plumbing fixtures were placed in unventilated, badly lighted, out-of-the-way places, and were oftentimes looked upon as necessary evils, they now occupy a prominent place in the household of the intelligent.

It is only about five years since a bath tub, sink or lavatory was a luxury in this city, to-day they are necessities and rightly so, for the individual cannot maintain that high standard of personal hygiene so necessary to the public health

of the community of which he is a unit, without their aid.

The campaign against disease may be carried on in various ways. Individual cases of disease can be nursed with all the skill that experience has shown to conduce to recovery, medical and surgical aid may be called in and all the re-



Our cartoonist's conception of W. B. Sime presiding at the examination.

sources of modern medicine can be brought to the aid of the afflicted ones. Such treatment has saved in the past and will save in the future many lives dear to friends and of incalculable value to country and race. This is, however,

News of the Manufacturers and Wholesalers

NEW COMPANY INCORPORATED.

The Walkerville Hardware Co. has been incorporated to carry on the business of wholesale and retail dealers in hardware, manufacturers' and mill supplies, sporting goods, and as plumbers, steamfitters and tinsmiths. The capital stock is \$60,000. The new company takes over the business of the Walkerville Hardware Co., a co-partnership composed of Abram Davis Green and James Richard Coate, both of whom are provisional directors of the new concern.

A NEW COMPANY.

A. P. Munning and W. L. Loeb announce the establishment of a new company to be devoted exclusively to the design and manufacture of electro-plating and buffing equipment and supplies of the highest grade only at Matawan, New Jersey. The company will be known as Munning-Loeb Co.

A NEW INDUSTRY.

Vancouver is to be the headquarters for manufacture in Canada for the Pacific Electric Heating Company, which has its headquarters at Ontario, California, and branch factories in New York and Chicago. The company's chief manufacture is the "hotpoint" electric iron.

DISPLAY OF FITTINGS.

An attractive display of bath room fixtures was made by Weed & Co., Buffalo, the following description and illustration of which appeared in the Hardware Dealers' Magazine:

"The background was papered to represent tile, with fixtures screwed in place, giving a somewhat natural appearance, save that no bathroom would have as many fixtures as represented. The contrast, however, was there, which produced the desired result in the eyes of the public. The floor of this "bathroom" was likewise tile papered. There are shown glass towel bars and shelves, whisk broom holders, soap and sponge racks, mirrors, shaving cabinets, a shower bath with curtain, glass holders, razor strops, toilet paper and cigar holders, tooth brush holder, etc. Even "his royal highness" is there with his bathrobe on, the latter bearing a price ticket. A display of this character is certainly worth while, for it is of one line of goods and the attention is con-

centrated, bringing to the mind of the sidewalk spectator some of the things which his bathroom lacks and thus paving the way for a sale."

A display of this nature in the win-

he sunk at that point to come down to the drum trap and it made a bad looking botched job of the matter and was an eyesore to the whole bathroom. Is there no other way of providing a safe outlet



A Splendid Display of Bathroom Fittings.

dow of a plumbing shop would be a great help to the making of sales in the lines shown, all of which should be handled by the plumber.

BACK FROM COAST.

E. B. Fewings of the Galt Electric and Gas Fixtures Co., has returned from a trip to the Pacific Coast. He states that conditions in the West were never better. There had been plenty of rain during the past two months and the best crop that had been harvested for many years was confidently expected. Mr. Fewings said he had traveled as far as Vancouver and Victoria and all through the country an optimistic spirit prevailed with regard to the harvest. All that is wanted now is good weather for the garnering of the crops.

WHY THE DRUM TRAP?

Editor Plumber and Steamfitter.—Is there any reason just why that old stand by, the drum trap, should not be displaced by some other means? For years and years this unhandy appliance has been used to the great inconvenience of all concerned. The other day the writer happened to visit some especially attractive apartment buildings. In the floor of one of the elegant bath rooms was a drum trap, which the plumber had located wrong to the extent that it came about half under the baseboard. The result was that the tiled flooring had to

to the bath tub other than using this appliance of our grandfathers?

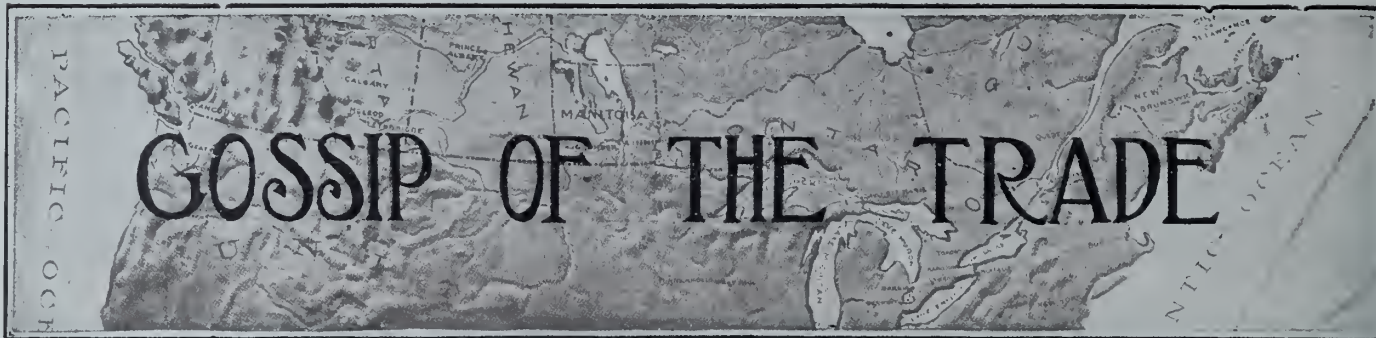
Montreal, July 19 J. C. Plummer.

We appreciate the situation given by our subscriber and have observed several instances where the plumber has made a bad job of the "roughing in" of the drum trap. It is not, however, always the plumber's fault entirely, as frequently the plans are changed after the trap is placed in position. There are other traps that can be used, in the place of the drum trap, and we look for the day when this last appliance to go below the floor, will be replaced by some article much easier to install and far more practical.—D.C.H.

AMERICAN FIRMS SECURING CONTRACTS.

Toronto, July 13.—Complaints are voiced here, both among supply men and members of the trade, over the fact that contracts for big buildings are going to American firms. Not only are the contracts let for all material to manufacturers on the other side of the line but the work in a number of cases has been let to United States plumbing firms.

This practice has been carried out in connection with buildings, the funds for which were raised by popular subscription and, as a natural result, there is much indignation expressed. It is felt that institutions supported at home so loyally should at least place their business at home.



Lady Got Even.

Mrs. E. A. Green, of Mason City, Iowa, according to an American paper, claims to have "got even" with a plumber who, in her opinion, had overcharged her: The story goes that while at work in Mrs. Green's house on a cistern pipe, a plumber in the employ of a local firm slipped and fell into the water. Being attracted by the man's cries, the lady, with the help of a neighbor and a rope, got him out, hustled him into a room



and furnished him with hot blankets to assist in restoring circulation. The man was then supplied with dry clothing, and, after finishing his work, left. The bill sent in by his employers for work done amounted to \$3.76. Mrs. Green, however, sent in a contra account for \$2 and cash for the balance. Her bill as itemized read thus:

To pair of socks	\$0.25
To use of a suit	0.50
To bath	0.25
To time pulling plumber out of water	1.00
	\$2.00

Big Machines Installed.

Cotter Bros., plumbing contractors, who are installing the plumbing at the car shops, Transcona, Man., have built a workshop in the yard and are installing up-to-date machinery. A 16-inch pipe-cutting machine, the largest in Western Canada, and one 7-inch machine, are among the new machines.

Split His Finger.

Frank Bullock, a plumber with J. R. Myers, Stratford, suffered a painful injury when a heavy grate slipped and fell on his hand. Five stitches were requir-

ed to close the cut. Along with several other plumbers, he was engaged in removing the old furnaces at the Stratford Collegiate Institute building.

Looking Into Sewage Matters.

It is understood that the board of water experts are to thoroughly investigate the question of Toronto's sewage disposal methods. While not primarily appointed for any such purpose the questions of water supply and sewage disposal are so closely connected that the board feels in duty bound to look into the whole question in the interests of the general public.

Strike is Over.

The building strike in Vancouver is over and the plumbers and steamfitters are going back with the rest of the building trades. It lasted six weeks.

A Great Catch.

In the course of a letter to Plumber and Steamfitter, Joe Barnes of Port Arthur, says: "I have been away for a rest after our strenuous time at the convention, filling in the part of the programme that the delegates did not take



advantage of—the fishing. We had a real old catch. If some of you eastern men could see our catch of speckled trout, you would be here yet."

Picnic Committees.

Those in charge of the Victoria journeymen plumbers' picnic were as follows: The judges for the contests, H. Humphries and H. Bonner; starters, C. Brown, F. C. Webb, George Atkins, and E. W. Warburton; clerk of the course,

Frank Perrott; dance committee, F. T. Mann and F. Henski; general committee, Geo. McDonald, Ed. Gilligan, E. W. Warburton, F. C. Webb, C. Brown, H. Bonner, F. Perrott, F. T. Mann, G. Atkins and H. Humphries.

A Combined Picnic.

On Saturday, July 15 the plumbers' and painters' unions of Victoria, B.C., held a combined picnic. An excellent programme had been arranged and everything went off with a swing. It was the third annual picnic of the two unions.

Secures New Office.

S. T. Dolson, Kamloops, B.C., has taken an office and showroom for his plumbing and heating business in the Beckman Building, upstairs.

Had Leg Broken.

John Conley, of Renfrew, is recovering from the effects of a broken leg. Charles Murray is looking after Mr. Conley's business, and has just completed the plumbing and heating in the new

Opens Plumbing Shop.

H. D. Sime, of Port Arthur, has opened a plumbing shop on Swift Current. He has been fortunate at the outset in securing the plumbing and heating contract for the new Empress Hotel at Swift Current. These contracts will run in the neighborhood of \$10,000.

Open a Branch.

Noble & Rich, of London, have opened a branch at Petrollea.

News Briefs.

E. Keith, North Vancouver, has sold to J. E. Goddard.

John Filsinger, plumber, Essex, has sold out.

John A. Peard & Co., plumbers, Montreal, have dissolved.

E. N. Wakely, formerly of Lethbridge, is building a tinshop at Cardston, Alta.

Matheson, Word & Co., plumbers, of Prince Rupert, B.C., have been succeeded by Smith and Mallett.

The H. McKenzie Hardware Co., Scott, Sask., have installed a complete equipment of tools for tinsmithing and are opening a tin department.

R. G. Sturgeon, Peterboro, recently contracted blood poisoning while engaged on a contract at Campbellford, Ont. He is making rapid progress towards recovery.

GOOD SHOWING IN IRON.

Cleveland, Ohio, July 27.—The Iron Trade Review to-day says:

New business in crude and finished steel is being handled quietly, and, while actual bookings are not quite so heavy as a few weeks ago, specifications are satisfactory and the iron trade as a whole continues to make a fairly good showing considering the season of the year. That the falling off in orders and specifications during the first two weeks of July, usually the dullest month of the year, as far as the steel industry is concerned, has not been so heavy as expected, is evidenced by the fact that mill operations show little change as compared with the last half of June.

Most of the steel companies now feel confident that the record for July will exceed that of May in point of orders entered on mill books, and that still further improvement can be expected about Aug. 1. Additional contracts for steel bars have been placed and the bar department of one of the large companies reports a heavy gain during the first 15 days in July, as compared with the same period last month. On account of the increased buying of sheets in June and the liberal specifications received during the past two weeks, the American Sheet & Tin Plate Co. has found it necessary to start additional mills this week. Ninety per cent. of the new business in sheets is for prompt shipment as stocks in consumers' hands are low.

A JOLLY FISHING PARTY.

Wm. Linton, of the Standard Ideal Co.'s Toronto sales office, took some of his plumbing friends down to Port Hope recently to enjoy some trout fishing. Needless to say, they were entertained royally by the Standard Ideal Co. and, through the kindness of Mr. Bush, general manager, they were personally conducted through the plant, and taken out to enjoy a fish in Mr. Bush's trout pond. They caught some pretty good fish, but their greatest achievement consisted in killing a snake, a feat which they were able to accomplish by their united efforts.

Mr. Bush provided two autos for the party including his own Pierce-Arrow, and also supplied chauffeurs. Before returning to Toronto, the boys were taken down by auto to Cobourg, where they

THE DETERIORATION OF SOLDER.

While it is generally supposed that solder does not change with age, a simple experiment will serve to indicate that it does. Melt a piece of solder that has become oxidized on the surface, either from age or exposure to damp air or both. It will be discovered that the metal is covered with a film of oxide and that it does not flow freely. Wherever it runs a trail of oxide is left behind it. Now try a piece of freshly made solder and the difference will at once be noticed. It will flow freely and without the film of oxide found on the other metal.

The phenomenon seems to be one of simple oxidation, and is not confined to the tin and lead alloys alone, but even pure tin is subject to it although not as readily. When moist air comes in contact with it, oxidation is much more rapid and pronounced, but in time the simple exposure to ordinary atmospheric influences will cause sufficient oxida-



Some incidents on fishing trip of Toronto party.

NOTICE TO SUBSCRIBERS.

The Subscription Dept. have recently received a number of complaints from subscribers, stating that their papers are late in arriving. As we are most anxious that our readers should receive their papers promptly, we earnestly request **ALL SUBSCRIBERS CHANGING THEIR ADDRESS** to notify the office promptly. When it is necessary for the Post office to re-address papers considerable time is lost.

gazed in admiration, at the sumptuous homes of American millionaires which decorate that town.

Mr. Linton does not appear in the accompanying cut, as his was the artistic hand which pressed the bulb. However, it is easy to recognize Gordon Ritchie, Walter Benson, Harry Hogarth, Frank Maxwell, Mr. Bowers, Mr. Sheriff and the two chauffeurs.

The smile on Gordon Ritchie's face sufficiently indicates what kind of time they were having.

tion to prevent a good clean melt being made.

In soldering by the regular method, where chloride of zinc is used for the flux, this oxide film is usually dissolved to a greater or less extent, so that it is usually not particularly noticeable unless the solder has deteriorated to a considerable degree.

While the question of the deterioration of solder is not an especially important one, it was recently found that in one instance a sample of solder that had "aged" had every indication of a very poor mixture although analysis proved it to be practically half tin and half lead.

(Concluded from page 14.)

The walls of said tank are water tight, lid is covered with 2½ ft. of earth. Greenwood, B.C. Robt. Halcrow.

R. H. mentions that the cesspool is water-tight on sides, but does not say anything regarding the bottom. This is not a septic tank and is nothing more than a cesspool, leaching or non-leaching depending as to whether or not it is completely tight. Perhaps matters might be remedied by simply putting a vent on the cesspool. There is none, and the pool is air bound and the pressure of the air might tend to keep the solids at the bottom, when water was passing through. We have drawn another cesspool with the vent shown and the inlet and outlet placed properly. This pool should clear sufficiently, so that it would not have to be pumped out as often as the subscriber states the one does that is arranged as he has shown.—D.C. H.

IS BUBBLE FOUNTAIN SANITARY?

Editor Plumber and Steamfitter.—The other day I stood in a place where there is one of these new fangled contraptions called the "bubble fountain," and watched the people come and go and help themselves. One of the first that I noticed was a small boy who stuck his mouth well down in the fountain and

drank greedily, for I suppose he was thirsty. The next was a little girl and she fussed around, afterward playing with the fountain, with a most dirty pair of hands. Soon there came along a gang of foreign laborers with long moustaches, which swept down into the water. A dirty tramp then took a chance and by this time I was ready to move on.

Now I wonder if this affair can be much more sanitary than the old-fashioned drinking cup, for all that has been said about it by many writers and some of the papers? Why would it not be more to the point to have a supply of paper cups on hand and, after each cup was used, throw it away? This could be done at a small cost, or the cups could be placed in some penny in a slot machine and obtained in that manner. It seems to me that such a proceeding would be very much more sanitary than the so-called sanitary drinking fountain, which don't make a hit with your Toronto, July 11. "Uncle Henry."

We publish this letter as received and would suggest that some of the readers send in their observation and experiences. We might also state that in some parts of the country the paper drinking cups are made use of to a considerable extent. Let us have your ideas on the subject.—Editor.

PLUMBING AND HEATING MARKETS

MONTREAL.

Montreal, July 28.—There is more or less of a feeling that the bulk of the plumbing now under way is what may be termed big jobs. Some of the men are reported with but little to do, although there is by no means a feeling that a dullness prevails. Great commercial buildings are under way, and apartment houses, terraces, etc., with here and there the smaller types. Work should be continued right through the fall at its present rate if the work conditions now existing are maintained. The demand for the various general lines is steady and keeps up at quite a level.

Enamelware.—As the season progresses the demand for enamelware has grown as the new buildings became ready for it. There is still much to expect in this branch of the business. The supply houses report a steady demand.

Boilers and Radiators.—There is a good trade reported with every prospect of a continuance of business at a satisfactory figure. Boilers and radiators are being delivered steadily now and the outlook for fall business is bright. The rapid growth around the city and district has been accountable for the business in this branch.

Lead Pipe.—Trade is active and a big demand is reported. The discount on lead pipe and waste is 30 p.c.; caulking

lead is 4½ cents a lb.; the discount on traps and bends is 50 per cent.

Solder.—There is nothing new in regard to solder. The demand continues unabated. Half and half is quoted at 24½ cents and wiping at 22 cents.

Iron Pipe.—Activity in the iron pipe trade is unbroken. Demand continues at a big figure, the city and country combining for the present business. Discounts on fittings are: malleable fittings, 40; cast iron, 60; flanged unions, 65; malleable bushings, 65; nipples, 75 and 10; malleable lipped unions, 65 p.c.

Soil Pipe.—The demand for soil pipe is still heavy. Otherwise there is nothing particular. For medium and heavy pipe the discount is 70 and 10; 7 and 8 in. pipe is 50; light pipe, 60 and 10; fittings are 70 and 10 p.c.

Metals.—Lead is much firmer just now. Domestic lead has gone up 10 cents during the past week and is now \$3.70; imported pig lead is unchanged at \$3.75. Tin is now at 47, a slight reduction from the last quotations. The demand for metals is steady, with the fall giving promise of a good trade. Spelter is quite firm at the time of writing.

TORONTO.

Toronto, July 28.—Business is quite brisk and the supply houses report that they have all they can conveniently han-

dle at present. In most places, large contracts are now being placed. Some firms have already booked up enough work to keep them busy until well into the fall. Although, in some places, conditions are only moderately busy, owing to lack of new buildings, the trade generally anticipate good fall business.

Prices are remaining steady, only one change being recorded. Wiping has come down a few cents in price.

Boilers and Radiators.—Trade is now at a high level. Large orders are being received and the supply houses are also getting advise orders still. The demand is brisker than at this time last year and there is every indication that like satisfactory conditions will prevail right through the summer and fall months.

Soil Pipe.—Business is better than at any time this year. Although varying quotations are received, the prevailing discount on medium and heavy is 70 and 10. On the 7 and 8-inch sizes, the discount is 50 per cent.

Lead Pipe.—The supply houses report a consistent demand. Lead waste sells at 9c. per lb., with a discount of 30 per cent. Caulking lead is quoted at 4½ cents per lb. The discount quoted on traps and bends is 50 per cent.

Iron Pipe and Fittings.—There is a steady brisk demand and indications are that trade will improve right along now. Cast iron fittings are quoted at 65 to 70. Malleable fittings stand at 37½ to 40 per cent. Other quotations are: cast iron bushings, 70; malleable, 67½; nipples, 75 and 10; headers, 60 and 10, although some quote 67½ and 70; flanged unions, 70; malleable-lipped unions, 65 per cent.; galvanized pipe, \$6.18; black pipe, 1-inch size, \$4.54.

Solder.—The price of wiping is down 2 cents, the figure asked to-day being 22. Half-and-half, however, remains at the same point, 27½ cents, being the prevailing quotation. The change in wiping is due to a tendency toward weakness noted in tin during the past fortnight. It is thought that the price may recede still further in the not far-distant future.

Metals.—The trade is still quiet but the indications at present all point to an early resumption of activity all along the line. In the first place, two more weeks of the present brand of weather will assure a bumper crop in the West, with all that entails. A fullest measure of prosperity in the industrial world will follow a bountiful harvest in the Western provinces. In the second place, conditions are slowly but surely improving in the United States. As the depressing influence of the American market has been the sole drag on the wheel of Canadian progress, its removal will mean immediate improvement all along the line in Canada.

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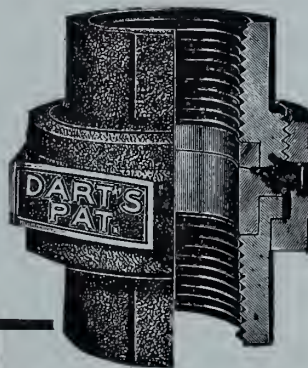
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EMERY WHEELS.

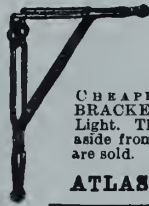


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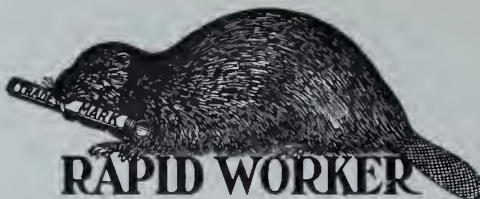
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If it were possible to employ a traveller who could call on thousands of the best dealers all through Canada every week, what salary would you figure he'd be worth—even supposing he did nothing more than go in and shake hands with these dealers, under such circumstances they'd be glad to see him.

Would he be worth \$200, \$300 or \$500 per week? Many a house would pretty nearly let him fix his own salary.

Equip an advertisement in this paper with a verbal handshake for every dealer in Canada, and a frank, brief, pointed talk about your goods and you add a traveller to your staff who will make thousands of calls a week for you at a salary of \$4 to \$8 a week—less than you would pay a first-class stenographer.

Of course this traveller won't displace any of your regular salesmen, but he will help them to sell more goods and open up more new accounts.



One man with a Beaver Die Stock is worth two or three men with any other Die Stock made.

"Beaver" Adjustable Die Stocks

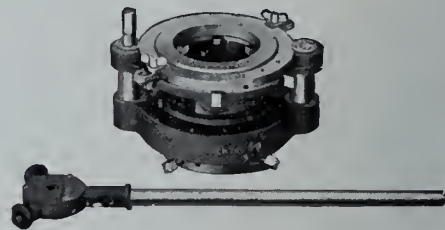
HAVE cut the cost of pipe threading in two because they will thread all sizes of pipe without changing dies. They are built on the receding principle which positively enables one man to thread any size of pipe and produce absolutely tight joints for all work, including hot water. They save the time formerly used in changing dies and looking after loose parts, and eliminate all of thread-stripping when backing off.



No. 25A, threading 1, 1¼, 1½, 2-inch pipe.
A boy can operate it.



No. 6, threading ¼, ½, ¾ inch, complete



No. 60. Uses two sets of dies. One set cuts 2½, 3, 3½ in the other cuts 4, 4½, 5, 6 in.; they are inserted without moving any parts.

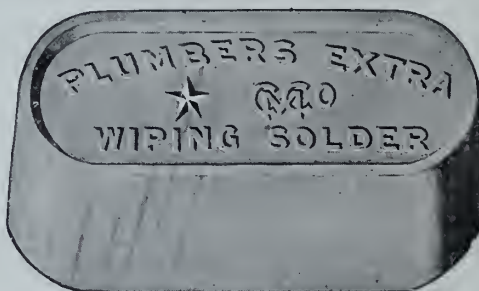
No loose Bushings or loose Dies on No 25A and No 6, and they cut 1, 1¼, 1½ and 2-inch pipes.
We can furnish a separate set of dies for 1, 1¼, 1½ and 2-inch pipe

Write us for Illustrated Price Lists.

BORDEN CANADIAN COMPANY,
66 Richmond Street East Toronto, Ontario

For a first class joint use EXTRA STAR WIPING SOLDER. It works like putty and sticks like glue.

The purest treasure
Mortal times afford:
Is Spotless Reputation.
King Richard II.



EXTRA STAR WIPING
SOLDER
Has a Spotless Reputation.

The Canada Metal Co., Ltd., FRASER AVE., Toronto

**WE
WANT
A
MAN**

of good character, in each city, town and village in Canada, where we are not already represented, to act as our

SPECIAL CIRCULATION REPRESENTATIVE.

Work is dignified and educative. Previous experience unnecessary. Duties at first need not interfere with your present employment.

WE WILL ASSIST THE RIGHT MAN TO BECOME INDEPENDENT FOR LIFE.

If you are making less than \$100.00 a month, and are trustworthy and ambitious to learn and become competent to handle our business in your vicinity, write us at once for full particulars.

MACLEAN PUBLISHING COMPANY,
143-149 University Ave., Toronto, Ont.

A Hundred Years Ago

this business was started in a very small way. By selling reliable goods and giving all our customers a fair and square service, it has grown to be one of the Largest Plumbing Supply Firms in the trade.

“Scotia” Plumbing Supplies

embrace the products of all the most reliable manufacturers in the trade. We carry large stocks and can generally ship from stock on receipt of order.

Test Our Service with a Trial Order.

Wm. Stairs, Son & Morrow, Limited

HALIFAX,

NOVA SCOTIA

Established A.D. 1810

***Maximum Heat at Minimum
Fuel Costs.***

SOVEREIGN BOILER

The cause of economy in fuel consumption is that no fuel is lost in the ash pit, and all heat generated comes directly in contact with the surfaces to be heated.

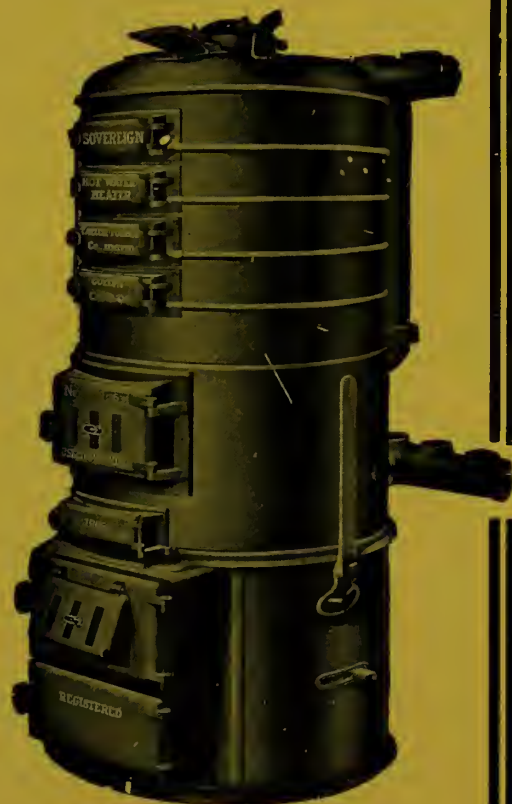
Other good features of the “SOVEREIGN” are its durability, the ease with which it is operated and the rapid circulation of the water.

Every part is thoroughly tested before it leaves our works, so we know what we are sending you and you know what you are getting—the best only.

Further Particulars in Our Descriptive Booklet

Taylor-Forbes Co., Ltd., GUELPH,
Ontario

TORONTO: 1088 King St. W. Taylor-Forbes Co., Ltd., 246 Craig St. W. Montreal, Que.
Taylor-Forbes Co., Ltd., 1070 Homer St., Vancouver, B. C. W. R. Mathers, 46 Princess St., St.
John, N.B. H. R. Moulden & Son, Travellers' Bldg., Winnipeg, Man. The Mechanics Supply
Company, Quebec, Que.





ASTORIA

AVOID COMPLAINTS THEY EAT UP YOUR PROFITS

It is annoying after you have finished a job, to have your telephone wire kept hot with the complaints of a dissatisfied customer. This can be prevented by using reliable fittings and supplies on every job. The Morrison Line of Plumbing Supplies are thoroughly reliable. We guarantee every article we sell to be exactly as represented.

In W.C. outfits you will find these lines to be thoroughly satisfactory.

"QUALITY"
Closet Combinations
"Elgin" Washdown
"Simplex" Syphon Jet
"Astoria" Square Back Syphon Jet

All our low-down outfits are furnished with our Patent Combined Ball Cock with Shut-off Cock. This is the simplest and most efficient on the market, with full weight copper lining.

THE
James Morrison Brass Mfg. Co.
 LIMITED

Toronto

...

...

Ontario

THE PLUMBER IS JUDGED BY HIS MATERIALS



"EMPIRE" **CLOSETS**

are the choice of plumbers who know, and to recommend them is to advertise your own standing in the trade.

The seat is of special construction, the tank large and the bowl well made and of good shape.

Full range of Plumbers' Supplies. Immediate shipments guaranteed.

EMPIRE MANUFACTURING CO., LTD.
 LONDON, ONT.

PLUMBER & STEAMFITTER

and Sanitary Engineer of Canada

THE MACLEAN PUBLISHING COMPANY, LIMITED, PUBLISHERS

MONTREAL, 701-702 Eastern Townships Bank Bldg.
LONDON, ENG., 88 Fleet St. E.C.

TORONTO, 143-149 University Ave

WINNIPEG, 34 Royal Bank Building
NEW YORK, 115 Broadway

Vol. V.

Publication Office : TORONTO, AUG. 15, 1911.

No. 16



THE
STANDARD
COMPANY LIMITED
GENERAL OFFICES AND FACTORIES · PORT HOPE · CANADA



PLATE F.332

CONTENTED CUSTOMERS ARE THE
BEST ASSET TO ANY BUSINESS

YOUR customers will be con-
tented if you supply them with
THE STANDARD slop sinks and other
fixtures.

They are unsurpassed for:—
QUALITY
FINISH
DURABILITY

BRANCH OFFICES AND SHOWROOMS

TORONTO 119 KING STREET EAST	MONTREAL 44 BEAVER HALL HILL	WINNIPEG 76 82 LOMBARD ST
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PLUMBER AND STEAMFITTER

Beaver Brand

Cast Iron Enamel Ware

Noted for Good Color, Durability and Attractiveness



The above cut shows our Wall Lavatory—artistic, sanitary and durable.

One of our leading sellers. Our splendidly equipped plant is producing an unbeatable range of enameled Bath Tubs, Slop Sinks, Kitchen Sinks, Laundry Tubs, Lavatories, Closets, etc., and our customers can be sure of satisfactory goods promptly shipped. A guarantee goes with all Beaver Brand Enameled Ware.

Amherst Foundry Co., Ltd., Amherst, N.S.

ONTARIO SALES AGENT.:

MONARCH BRASS MFG. CO., LTD., ¹⁷⁸⁻¹⁸⁰
Victoria Street, TORONTO

MARITIME PROVINCES
All Jobbing Houses

MONTREAL, P.Q.
All Jobbing Houses

WINNIPEG, MAN.
E. B. Plewes, 120 Lombard St.

VANCOUVER, B.C.
A. O. Campbell

PLUMBER AND STEAMFITTER

The Honeywell System OF HOT WATER HEATING

WAS ADOPTED IN THE YEAR 1910 IN

FORTY PER CENT.

OF TOTAL

Hot Water Installations Throughout Canada

Upon no other point are Architects, Steamfitters and Proprietors so well agreed as on the Merits of the Honeywell System.

The Honeywell Heating Specialty Company

Frank T. Rawley,
Manager for Canada

Room 1008 Eastern Townships Bank Bldg., Montreal.
Phone Main 4615



Malleable and Cast-iron-pipe Fittings

MANUFACTURED BY

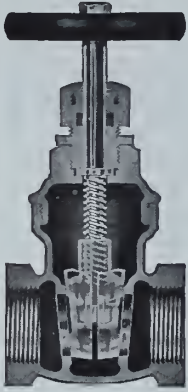
FITTINGS LIMITED

OSHAWA

- WINNIPEG -

MONTREAL

Our 1911 Catalogue is now ready.



A NEW VALVE

JENKINS BROS.'

GUN METAL AND IRON BODY

GATE VALVES

"TYPE K"

Special Features:

Highest Quality Steam Metal. Perfect Interchangeability. Double Compensating Bronze Wedges. Metal Gland in Stuffing-Box. Great Strength of All Parts. Carefully tested to 250-lb. Water Pressure

UNRIVALLED IN DESIGN AND WORKMANSHIP

A Thoroughly Reliable Gate Valve for Steam, Water, Oil, Gas or Air. A trial will convince you that it will pay you to use these valves on all your work.

Stamped with TRADE MARK like cut.

Stocked by Machinery, Hardware and Supply Dealers throughout the World.

Catalogue and Full Particulars Cheerfully Furnished on Application.

JENKINS BROS., Limited

Head Office and Works:

102 St. Remi St., Montreal, Canada

And at

95 Queen Victoria St., London, E.C.

Under Expert Examination our

BRASS GOODS

have proved to be of exceptional quality. This is because of the modern machinery and methods we employ for every process of manufacture.

WE MAKE FITTINGS FOR GAS, WATER AND STEAM

CONTRACT WORK, such as Gas Stove Cocks, all sorts of CORPORATION BRASS, etc., is our special care, also PLUMBERS' BRASS GOODS, etc.

We have the plant and the trained workmen to turn out the very best grade of contract supplies in any quantity that may be required.

QUALITY CONSIDERED, OUR PRICES ARE EXCEPTIONALLY LOW

OUR FULL GUARANTEE WITH EVERY PIECE

The Wallaceburg Brass and Iron Mfg. Co., Limited
Wallaceburg **Ontario**

IT RINGS TRUE,

Doesn't it, when a manufacturer says: "You can try my tools with no cost to yourself except letter postage."

An offer so fairly made should and does bring responses from plumbers and steamfitters everywhere. Men knowing tools as they do, figure that my tools must "have something" over other makes or I couldn't afford to keep my "Free Trial Offer" standing.

And They're Right

I DON'T MANUFACTURE STOCK GOODS. Every piece of work that goes out of the Nye plant has the impress of individuality upon it. My tools are not ordinary tools. THEY'RE DIFFERENT.

They are not different, however, without distinctive points of design and utility. Tradition has been discarded in designing Nye tools with resultant improvements that cannot fail to appeal to discriminating plumbers and steamfitters. THE "FREE TRIAL" offer applies to all NYE GOODS.

ALL I ASK IS YOUR TRIAL ORDER

NYE,
THE DIE MAN

The Nye Tool and Machine Works,

124 N. Jefferson St.
CHICAGO, ILL



History:

For the whole world we established the high standard of Chain Tool strength and do unfailingly sustain our claim for superiority.

Your pull, our pull and "Vulcan-Bijaw's" live on same basis—if not superior it couldn't hold.

In the matter of service we've doubled up on "Vulcan-Bijaw" pull!

The double-ended reversible jaws, easily turned when teeth

first in use become dull, assure the service of two tools at the price of one.

There's a full measure of economy in "Vulcan-Bijaws."

All sizes; each size equal to four pairs common tongs. See your dealer.

A POSTAL BRINGS LITERATURE

J. H. WILLIAMS & CO.

Superior Drop-Forged
Chain Pipe Tools

77 Richards St., BROOKLYN, N.Y.

WROUGHT PIPE

BLACK and GALVANIZED. SIZES, 1/8 IN. TO 4 IN.

All our pipe thoroughly inspected, tested to 600 lbs. hydraulic pressure and branded.

Ask your jobber for



Brand

CANADIAN TUBE & IRON CO., LIMITED

Montreal

Works: Lachine Canal

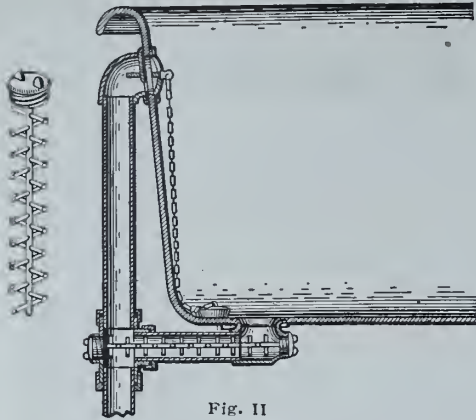


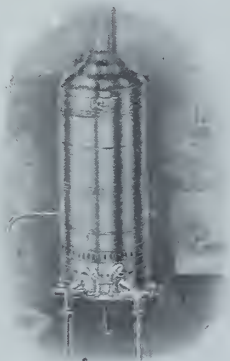
Fig. II
E.N.O. Patent Bath and Waste Overflow

SOMETHING NEW

Here is a Bath Waste and Overflow that can be thoroughly cleaned out from two outlets, viz: back of Bath or underneath. The Cleanout Rod, Fig. I, is made of aluminum, has a ball joint connection to the plug. All the fittings are of cast brass and heavily nickel plated. The whole is got up for use and will stand more abuse than any other Bath Waste in existence. Our patent can be used with any standard bath on the market.

SOLE CANADIAN MANUFACTURERS

Westport Mfg. & Plating Co., Limited
117½ BANK STREET, OTTAWA

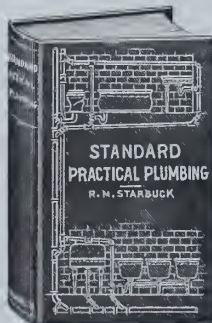


Vent or Non-Vent.

The "Rapid" Instantaneous Bath Heater

is bound to please you and your customers; not a weak point in it. Absolutely guaranteed. Not necessary to use a vent pipe. All gas valves adjustable to local gas pressures, insuring perfect combustion. We claim the "Rapid" will heat more water with less gas consumption than any other instantaneous heater on the market. Make us prove it by sending us or giving your jobber a sample order.

RAPID HEATER COMPANY
(INCORPORATED)
GRAND RAPIDS, MICH., U.S.A.



JUST OFF THE PRESS

Standard Practical Plumbing

By R. M. Starbuck

347 SPECIALLY MADE ILLUSTRATIONS

PRICE \$3.00

"Standard Practical Plumbing" is indispensable to the Master Plumber, the Journeyman Plumber, and the Apprentice Plumber. As the book is specially strong in the exhaustive treatment of the skilled work of the plumber, it commends itself at once to every one working in any branch of the plumbing trade. Send for it to-day.

TECHNICAL BOOK DEPARTMENT

MACLEAN PUBLISHING COMPANY
143-149 UNIVERSITY AVENUE - TORONTO



Just a twist of the wrist

With a CLEVELAND AUTOMATIC RATCHET and you can bore a neat, clean hole through any joist.

And do it in so much less time required by the ordinary ratchet that it will surprise you.

Order a CLEVELAND AUTOMATIC RATCHET and try it on the very next job you have.

It will pay for itself on that one job in the time saved.

And the first cost is the total expenditure, as owing to its simple construction, and the quality of material used, it cannot break or get out of order.

Write to-day for prices and further information

The McDonald Brothers Co.
CLEVELAND, - - OHIO



Small Costs—Big Results

THE COST of a Want Ad. in Plumber and Steamfitter is estimated in CENTS.

THE RESULTS are figured in DOLLARS.

MASTER plumbers and steamfitters, supply men, manufacturers and travellers from VANCOUVER TO HALIFAX are consistent readers of PLUMBER and STEAMFITTER. This makes a Want Ad. in Plumber and Steamfitter the only satisfactory way to place your proposition before those most vitally interested.

WOULD YOU BUY OR SELL—A Typewriter—A Show-case—Set of Tools—Desk—Secure a Traveller—Bookkeeper—Partner

Use a Plumber and Steamfitter Want Ad.

RATES: (Payable in advance)

- 2c. per word first insertion.
- 1c. per word subsequent insertions.
- 5c. extra per insertion for box number if desired.

Write or phone our nearest office.

**Plumber and Steamfitter
and Sanitary Engineer of Canada**

MONTREAL - TORONTO
WINNIPEG

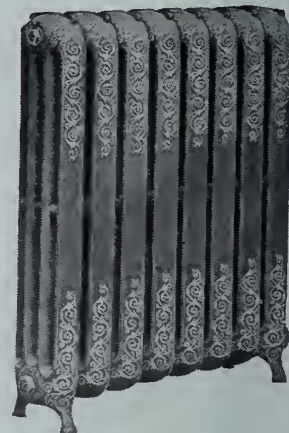


"KING"

BOILERS and RADIATORS



Easier to Sell
Easier to Mount
Easier and Cheaper
to Operate



You Can't Afford to Install Old-Fashioned Goods

NOT only is Life too short, but what is more to the point, competition is much too strenuous.

To get the most out of your high-priced journeymen, your modern and expensive shop equipment, and the investment of your own time, money and experience, you can't afford to handicap this organization by putting up with out-of-date goods and unprogressive business methods.

Your profits and your success depend upon your reputation as a heating contractor, and this, in turn, depends upon the number of high-class, more-than "satisfactory" jobs to your credit.

Why not let "**KING**" **Boilers and Radiators** help you turn out more work, better work and at a better profit?

You know that these goods fairly bristle with points of superiority—useful advantages that your customers are looking for, and you know that we're making these features public.

We'd like to get together with you on this season's work and show you some of our practical plans for helping you. Our success as manufacturers of "King" goods, you know, depends upon your success as a retailer of them.

Don't take your opinions on the new "King" second-hand. Try one on your next job and find out for yourself its value as a trade-puller.

STEEL AND RADIATION LIMITED

TORONTO—Head Office: Fraser Avenue.
Showrooms: 78-80 Adelaide St. E.

MONTREAL—138 Craig St. W.

Plumber and Steamfitter

and Sanitary Engineer of Canada

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J. G. LORRIMAN }

Circulating amongst Plumbers,
Steam., Hot Water and Gas Fit-
ters, Sanitary Inspectors, Heating and
Ventilating Engineers, City Engineers,
Boards of Health, Architects, etc.

TORONTO, AUGUST 15, 1911

IT HAS generally been the experience in the past that, following the annual convention, little would be done in association circles for a considerable time. The officers were too often quite willing to rest on their oars a bit after the hard work at the annual gathering. It is gratifying to note that no such tendency is being shown this year. The officers are already hard at work and there are evidences of activity on every hand.

President Walsh urges that the question of a permanent official to assist the secretary be taken up without delay. The executive officers have the power to make the appointment but they lack what is equally necessary—the funds. Until such time as the local associations advance their per capita tax for the year, the officers will not feel justified in engaging a paid official. It is, therefore, highly necessary that each local should attend to the matter of payment without further delay.

Ontario is setting a good example for the other provinces to follow. After the local associations have been organized and placed on a proper footing, the success of the provincial body is assured.

Leading members in all parts of the country are doing what they can to effect the change from the name “plumber” to “sanitary and heating engineer.” As has been stated before, the change will come gradually but concerted action will do a great deal to bring it about. The first step would seem to be to acquaint the public of the fact that the change is to be made.

The revision of the by-laws is a wise move. With the new legislation, which has been put forth there is need to go over the constitution carefully and see that each clause is brought strictly up-to-date.

PAY WHAT YOU owe promptly and see that those who owe you do the same.

STANDARDIZATION is one of the necessities of the moment. Uniformity of ordinances is something every member of the trade would like to see accomplished. But the need does not stop there by any means. Standardization is needed in practically every branch and department of business to-day. The need is being recognized in the banking world and we now find a certain uniformity in the form of checks, drafts and notes. In transportation circles, we find more uniformity in bills of lading.

In discussing this question, a contemporary says:

It is suggested by some authorities in trade that manufacturers and wholesalers should fall in line with modern requirements in adopting a greater uniformity in their invoices. What a boon it would be to the retailer were billheads—at least in each trade—uniform in width and also uniform in so far as relates to the location of the date, discounts and other particulars. Improvement could also be made in the matter of ruling. It is also suggested that there should moreover, be extra columns on the extreme right, to permit of the extension of each item by the retailer, at his own selling price.

The time will come probably when there will be standardization in everything more or less in the business world. In the meantime, uniformity in ordinances and in material is sadly needed in the sanitary trade and steps to effect the accomplishment of this much desired object should be taken.

A COPY OF a plumbing ad., which appeared in an Ontario weekly newspaper on Aug. 9, has been received. The curious part of it is that the ad. refers to the zero weather and asks that work in repairing pipes be referred to the advertiser. Either this man is a practical joker or he has been paying good hard cash for an ad. which he has forgotten to change for six months or so.

STATISTICS compiled by jobbers show that only 8 per cent. of master plumbers in America discount their bills. Two per cent. pay for their goods in advance—quite frequently because they have to—and 42 per cent. take 60 days' time. The rest pay in

THE CONTROL OF FINANCES. lengths of time varying from 90 days to 120 days or fail altogether. These figures, which have been secured by careful study of the books of the wholesalers, indicate that the trade, as a whole, is not awake to the necessity of financing business on a sound basis.

The discount allowed for cash or for payment within the month, looks small at the time. In a great many cases, men who are a little hard pressed for funds do not think it worth while to pay within the time and get the two off allowed. If they stopped to figure what it netted them on the year, they would be less prone to consider the discount a matter of small moment.

The trouble is that too many men in the trade are not financiers at all. They let the business end take care of itself or pay but indifferent attention to it, which con-

stitutes one of the main reasons why so many fail or just manage to grub a poor existence as a reward for their hard work.

It is hard to believe that only eight men out of every hundred have the necessary foresight to finance their business on a proper basis, but the figures are there to prove it.

COLD HARD CASH is needed before a permanent salaried secretary can be appointed. It is "up to" the local associations.

WE OFTEN HEAR the expression used, "the effete east." The march of progress has been so steadily westward that the impression has become settled that the farther west you go, the more up-to-date you find things.

LIVELIER METHODS IN THE EAST. There are undoubtedly good grounds for this assumption. Starting in the Orient and traveling westward through Europe and across to America, it will be found that, generally speaking, advancement travels the same route as the sun.

But the "effete" countries of Europe appear to be waking up. In commercial matters, they are showing a new energy and, in some respects at least, are outstripping their western competitors. It may surprise some to learn that the 5, 10 and 15 cent store, which is a typical product of the western hemisphere, has found a foothold in Spain. Commerce in Spain is generally supposed to be conducted on a slow and dignified basis, far removed from the hustle and bustle which must necessarily go with the 5, 10 and 15 cent emporium. Nevertheless, a large departmental store, or bazaar as it is called there, has been opened in Berlin where hardware, chinaware, fancy articles are sold, nothing exceeding 12 cents in price. Furthermore, it transpires that in Malaga there has been such a store for over twenty years where prices vary from 2 to 9 cents—never more. It is now proposed to carry a larger assortment of goods than in the past and to Americanize the store methods in some respects.

Undoubtedly, things are being stirred up in the east. At this rate, we may some day find the solemn Turkish merchants delivering goods by motor truck and advertisements of Persian rugs placarded on the walls of Bagdad.

A MOTOR RIDE through the Rockies is mentioned as one of the entertainment features of next year's convention at Calgary. That would be an experience worth traveling some distance for.

WITH the fall season approaching, when the technical schools and night classes open for the winter sessions, it is timely to point out the importance, and even the necessity for those who aspire to rise in the trade, of learning to draw. If it was advisable for the ordinary master plumber to have the ability to draw up plans of heating and plumbing systems, how much more important is it that his successor, the Sanitary and Heating Engineer, should possess the professional skill of a mechanical draftsman?

The installing of heating and sanitary appliances, in keeping pace with the advances made in other branches of the building trades, has become a real science. It is work which cannot be successfully done by guess. It must be executed strictly according to a carefully thought out plan, and that plan cannot be followed correctly and economically if it is communicated to the workmen only through the verbal instructions of the foreman. It should certainly be graphically submitted to the journeyman by means of a drawing made to scale.

A knowledge of mechanical drawing has another advantage also, in that it enables the estimator to more fully understand architects' plans, and thus to lay out his own work more advantageously.

In the larger cities it is an easy matter to obtain instruction in this study. The night classes of the Y.M.C.A.'s and Technical Schools almost invariably include courses in mechanical drawing or, if they do not, they would willingly add the course, if sufficient students presented themselves to make it worth while. In the smaller places there may not be any opportunity outside the correspondence schools, but these afford a splendid chance for those who are ambitious and will do the home work necessary to success.

NEW REGULATIONS are demanded in Moncton by the master plumbers. The movement for better conditions is spreading from coast to coast.

HITCH YOUR wagon to a star is good advice. James Marr, of Calgary, has achieved splendid results by linking up a star—an electric one—with his business.

VICE-PRESIDENT Harry Potts, of Saskatchewan, has mapped out a good year's work for himself. If he carries it out, he will have done a great deal in the cause of trade organization.

"CONCENTRATE on Collections" is the advice of one who has made a big success of his own business. See that others pay you what they owe and the collector will not have to call so often at your own office.

AS WILL BE seen in another column, the plumbing examinations in Port Arthur are conducted on a rigid basis, as the number of failures shows. They believe in keeping up the standard of the trade there.

WHEN A MAN who has held the highest offices in an association, consents to buckle on the harness again and take up the arduous duties of secretary, it is a pretty sure sign that he has the best interests of the organization at heart. That is what John Watson has done.

GEORGE COOPER wishes it stated that he was not the man whose picture, sans head, was shown in the July 1 issue of Plumber and Steamfitter. General opinion picks him as the man but George declares he can prove an alibi. Harry Mahoney, second choice, also enters an emphatic denial.

News of the Canadian Society of Sanitary and Heating Engineers

Revised Draft of By-laws Has Been Drawn Up

Officers at Montreal are Working Hard at the Task of Amending the Constitution and Regulations in Accordance With Recent Changes—Need is Felt for a Permanent Official.

Montreal, Aug. 12.—Two meetings of the sub-executive of the Canadian Society of Sanitary and Heating Engineers have been held and enough work was laid out to keep each individual member busy until the next meeting. They have been diligently following out the work laid down for them ever since and all seem inspired with the determination to make the coming year a banner one for the society.

Secretary Watson has been particularly busy. The sub-executive have taken up the revision of the constitution and by-laws and have been making excellent progress. Much of the work has fallen on the shoulders of the secretary, who holds the deserved reputation of having the constitution on his finger tips. This work has been extremely heavy and the secretary has been compelled to spend many evenings at his desk since he assumed the duties of that office. The first draft has now been completed and has been submitted to President Walsh for approval. It has been suggested that the new by-laws be published between now and the date of the next convention, when they will come up for approval. This would give all members a chance to look them over and study them thoroughly. The delegates would thus be in a position to discuss the various points in a thorough and comprehensive manner.

Paid Secretary Needed.

Each day makes more apparent the need for a salaried official to assist Secretary Watson in his work. The detail work and correspondence is too heavy for a man to handle, when he has his own business to attend to also. It is becoming absolutely essential, therefore, that the salaried official be selected and started to work without further delay.

In order to make the appointment, the officers require capital to pay the salary of the officer. This can be obtained, if the various local associations pay their per capita tax in advance. It will be remembered that, during the discussion at the convention which led up to the decision to appoint a salaried official,

delegates from a large number of associations gave their pledge that the tax would be paid in advance this year, in order to make the appointment a practical possibility. Largely on the strength of these pledges, the decision was reached.

It will facilitate matters considerably if the locals will attend to this matter and forward the money at once. The officers will then be in a position to make the necessary arrangements for a permanent salaried official.

Organizing the Local Associations

The officers of the Ontario Society of Sanitary and Heating Engineers are losing no time in perfecting local organizations in all of the larger centres of the province. On Saturday, July 29 a meeting was held at Berlin, in the Wayfar House of Master Plumbers from Berlin, Galt and Preston, as a result of which associations were formed by the Berlin and Galt representatives. The meeting was arranged by Secretary Frankland, of Toronto. As a number of master plumbers from Toronto were going to Berlin that day with the union journeymen's excursion, it occurred to the secretary that a splendid opportunity was presented of holding a conference between the Toronto men and the master plumbers from all the places in that district. He accordingly made the necessary arrangements and wrote to the various men whose presence was desired.

The meeting started at 3 o'clock, with a good attendance. In addition to the Toronto contingent who numbered close to a score, there were present four Galt master plumbers, four from Berlin and two from Preston, J. Cunningham represented Paris, Harry Peters Stratford and A. Malcolm, Guelph. The Berlin men present were: Messrs. Israel, J.

Hainsworth, H. Wolfhard and W. Knell, the Galt men in attendance were Messrs. H. Dakin, Bennett, Lockhart and Ross, W. F. Mickus and J. Spolding were present from Stratford. The Toronto men at the meeting were Secretary Frankland, Geo. Cooper, past president of the National Association, Messrs. Needham, Hicks, Passmore and Schultz.

Mr. Frankland was voted into the chair and the proceedings were opened with a statement from him of the object of the meeting and a resume of the work that was being done at large throughout the province.

A long discussion ensued in the course of which grievances and opinions were aired, all in attendance taking part. It was clearly demonstrated that the company was unanimous on the score of the benefits to be derived from the formation of local associations but some were afraid that would not be possible to effect the work of organization successfully. A number of the Toronto men spoke, referring rather dolefully to the evils which existed in the Queen City, and advising the representatives from the smaller places to avoid such conditions by immediate organization. Geo. Cooper gave a brief verbal report of the steps which had been taken at the June convention of the National.

After an hour and a half had been spent in general discussion, the chairman decided to bring matters to a head.

"Now then," he announced, "let's get down to business. The Berlin delegates go over to that corner of the room. The Galt delegates come over to this corner and the Preston men go there. Now, either organize your local associations among yourselves now or arrange a date for a meeting of your own next week to do so."

The company dissolved into little groups as indicated and the question of local organization was taken up separately in three different parts of the room. In half an hour's time, the representatives had, in each case, decided to go ahead with the formation of locals and preliminary arrangements were made.

It is understood that since then the work has been kept up and all three places are in a fair way to be well organized.

Meeting in Toronto.

Secretary Frankland now suggests

that a meeting be held at Toronto during Exhibition time.

"Their are dozens of plumbers who come to Toronto during Exhibition," he explains, "and there is no reason why they should not all endeavor to come on the same day. An hour together would enable us to do a great deal toward im-

proving local organizations in all parts of the province. Quite a number have promised to come if we can arrange a suitable day."

An effort will be made to set one day for master plumbers to attend the Exhibition and to get them together for a short time that day.

Will Organize Locals First in Saskatchewan

Vice-President Potts Has Plans Under Way for the Improvement of Conditions in That Province—Big Delegation to Convention Next Year Promised—A Sketch of the Provincial Vice-President.

Harry J. Potts, of Regina, vice-president for Saskatchewan, of the Canadian Society of Sanitary and Heating Engineers, who was in attendance at the recent convention, was one of the picturesque characters of the gathering. A young man, and a master plumber in the true sense of the word, he has had a career which he himself characterises as "not altogether a failure," but which, as a matter of fact, is one outstanding in the records of the plumbing trade in the west.

Like a good many more of the men who are making good in the west, Mr. Potts hails from the County of Bruce, in the old Province of Ontario. He first saw the light of day on his parents' farm near Paisley, where during the first 18 years he learned to plow the fields and make the hay as only Bruce farmers know how. In 1889, however, he wandered as far as Walkerton to enter as an apprentice to the plumbing trade. In the shop of W. J. Whitlock, later conducted by H. A. Havill, he learned to "wipe a joint," and do other tricks peculiar to the trade.

The lure of the west called Mr. Potts after his four years of apprenticeship were served, and he took the trail for Regina, then an embryo city of the plains. There he accepted a position as manager of the plumbing department for the Smith and Ferguson Company, which was at the time conducting a hardware, tinsmithing and plumbing business. Two years of this position, however, laid the foundation for a business of his own, and Mr. Potts entered into partnership with George Cook, a pioneer of Regina, and started a plumbing and steamfitting establishment under the name of Cook and Potts. Later Digby A. Smith was taken into the firm and a couple of years ago Mr. Cook retired, the firm name being changed to Potts and Smith, which name it retains at the present time. To-day the firm has a creditable business in Regina. It is one of the leading establishments of its kind in the west.

In connection with the plumbing trade in Saskatchewan, Mr. Potts admits that it is in a very bad condition, though possibly this is not altogether the fault of the trade. Saskatchewan plumbers have not been approached along the lines of organization until the present time, and better things are expected for the future. So far as Regina is concerned the plumbers have things in fairly good shape, and Saskatoon, also, is pretty well into line. That is as far as organization goes in the province. It is



Vice-President Harry J. Potts.

the intention of the Regina Association to make an effort at organization in Moose Jaw, Prince Albert, Weyburn and perhaps, Yorkton and Swift Current during the present year. No move has been made towards provincial organization, because it is felt that the locals should first be firmly established. Mr. Potts is confident, however, that when the National Association meets in Calgary next year Saskatchewan will have as large a representation of delegates as any province in the Dominion.

SECRETARY WATSON.

Although John Watson, the secretary of the C.S. of S. & H.E., is one of the best known members of the national body a brief sketch of his career will not be amiss. He was born in Montreal fifty-three years ago, and with the exception of a few years which he spent in Toronto, he has remained a loyal Montrealer ever since. At the age of 16 he started his apprenticeship with E. Chanteloup, Montreal, and stayed with him for five years. At the expiration of his term as an apprentice, John Watson started out in the world and landed at Toronto. Eight years he remained in the Queen City, serving with W. J. McGuire, Keith & Fitzsimmons, and Frank Wheeler. He then returned to Montreal and joined hands with D. M. McCrae, forming the firm of McCrae & Watson. Ten years later, he went into business on his own account in Westmount under the firm name of John Watson & Co. Westmount is still a suburb of Montreal, but Mr. Watson is just as certain of its ultimate growth and absorption of Montreal, as he is of the final triumph of trade organization. "We expect to annex Montreal," he will tell you, "and after reciprocity is settled, we may cast our line out for Toronto."

He has been a member of the Montreal Master Plumbers' Association for about twenty years. He attended the first meeting of the National Association in 1896 and has not missed a convention since. It is safe to predict that he will keep up this record as long as he remains in active business.

John Watson has become a power in the proceedings at all conventions, partly as a result of his long experience and his complete mastery of the constitution. During the recent gathering at the Twin Cities, some point with reference to the constitution arose in a committee meeting. One of the members started to chase through the closely printed pages in pursuit of the desired information. "No use going to that bother," advised another member "just call in John Watson. He has the constitution off by heart and will tell you the clause, page and line where that point is dealt with."

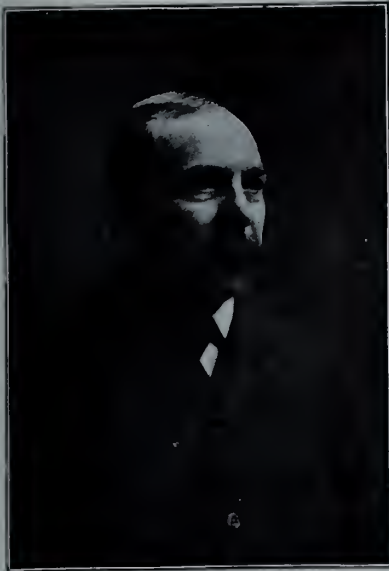
John has become, in a sense, a living index to the great mass of legislative matter which goes to make up the constitution. If any member, less well informed, introduces a motion which in any way infringes or duplicates some clause already on the books, John Watson will be found on the floor in short order with the information.

He has been president of the National Association, filling that high post with distinction. He was selected as secretary for the present year as it was rea-

lized that he would do the work and do it thoroughly. The new society has reached a stage where hard and earnest work is highly necessary. In undertaking his arduous duties, he has one request to make. He asks that the officers and

members be more prompt in regard to answering letters. The delay and neglect so frequently experienced now, adds to the work of the office. Frequently, he is held up for weeks for lack of information which some member should have supplied him. This is a chronic fault with many men in the trade—most men for that matter—and it is hoped that some improvement will be shown this year.

Secretary Watson is full of enthusiasm for the success of the new work undertaken. In the course of a letter to Plumber and Steamfitter, he says: "I have noticed the cut in your July 1 number on page 14 and it looks to me like a roter. I have my hands full now rooting for the C.S. of S. and H. E. With Walsh in the box, all the other excellent officers in the field and Plumber and Steamfitter in the box, I think it is a 2 to 1 shot for the Canadian society. While we are at this game, we will organize this beautiful Canada of ours from one end to the other. There will not be a city or town in the whole Dominion that will not have associations and good and careful sanitary by-laws. The health of our hardy Canadian people will be assured."



John Watson, Secretary of the C. S. of S. and H.E. and an Authority on the Constitution.

one practical journeyman plumber and the city plumbing inspector. Examinations are held in the third week of each month and consist of practical, written and chart tests. Marks are averaged up and seventy-five per cent. constitutes a pass and entitles candidate to a license. A candidate failing twice is put back for a time at the discretion of the board. Three years' practical experience in the plumbing business is required before applicants are eligible to sit for examination for license.

Percentage of Passes.

At the first examination six out of eleven candidates passed, at the second nine out of fifteen and the quality of the answers was greatly improved, showing that the men realized the importance of the examinations and studied, which is in itself an excellent sign, for one of the principal objects of these examinations is to educate and encourage a more intelligent application of the principles of plumbing.

Early to Judge Results.

Of the effect of these examinations in improving the standard of work done, it is a little early yet to judge, as it is not yet a month since the first examination was held, but of its ultimate results we have not the least doubt. For as was previously pointed out it has been the means of making the men study and if apart from the fact that the public reaps a direct benefit in health and convenience by having the highest class of work done, it helps them to realize the integral part they occupy in that wonderful development called civilization which is ever approaching a higher state of perfection; then for this reason only their end would be justified.

Progressive Steps Taken in City of Port Arthur

How Examinations are Conducted There—The Basis on Which Marks are Given and the Results to Date—A Resume of Conditions

THE position to which the plumbing profession is being brought in Port Arthur is the result of years of patient and persevering work on the part of the Master Plumbers' Association. It is the story of a long struggle, of hopes deferred and disappointments, but through sheer doggedness they won out; and although there is considerable work yet to do, their claims are recognized, and they have succeeded in placing the plumbing business where it rightly belongs, as one of the great factors in improving sanitary conditions and maintaining a high standard of public health, which after all is one of the greatest assets this or any other City can have. Furthermore in doing this work they have perhaps unconsciously educated themselves, at any rate there seems to be a feeling slowly but gradually gaining ground that there is something more than mere dollars and cents for those engaged in this ancient and honorable trade or profession of plumbing. In short that the solid satisfaction of having installed a good sound sanitary job is as much to be sought after as a big profit.

The fact is that in the long run a man is judged by results and if he has the true interests of his profession at heart and turns out nothing but good sound honest work, he builds up a reputation and the profits are bound to follow, to say nothing of the benefits he is conferring upon the community at large, by refusing to do cheap shoddy work with all its attendant evils.

The First Success.

As is so often the case once fortune begins to smile success comes fast, and one of the first successes was the appointment of a plumbing inspector, which took place in November, 1910. This was followed by a revision of the plumbing by-law in February, 1911, and in April of this year a by-law was passed to provide for the appointment of a board of examiners and to license and regulate plumbers.

How Board is Constituted.

The examining board consists of three members, one practical master plumber,

Wants Stringent Measures Taken

Ottawa, Aug. 4.—Dr. Shirreff, Medical Health Officer, is making an important recommendation to the board of health with regard to discoveries of defective plumbing in the city by the sanitary inspectors. He asks that the board take steps to have the building inspector instructed not to issue building permits to small shacks in which proper sanitary appliances cannot be installed. He is also urging the appointment of an additional plumbing inspector to look into the cases discovered.

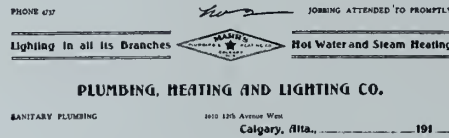
Ingenious Device Which has Brought Direct Returns

Marr's Plumbing and Heating Co., Calgary use Star as Trade Mark—Large Electric Sign Draws Business—Steps Being Taken to Change Name to "Sanitary and Heating Engineers."

ONE of the most interesting figures at the June convention was James Marr, senior, Calgary. His long years of experience in the trade have given him a practical knowledge and an insight into organization problems possessed by few, so that his advice on all matters, that came up, was of great value. It is interesting to note that the same broad progressiveness which he displayed in treating association matters has been applied by Mr. Marr to the upbuilding of his own business, with the success which might be expected.

In the first place, he believes in publicity and has adopted an ingenious method of impressing the name of his firm on the public mind. One of the objects aimed at in advertising is to make the firm name familiar to the people from whom custom is drawn. Some firms accomplish this object by the adoption of advertising slogans or the repetition of a catch phrase in their advertising matter. Mr. Marr, who has

a son in business with him, has taken advantages of the plural form of the name and adopted a star as his trade mark. A large electrical sign in the shape of a star, with the word "Marrs" in bright letters stands out prominently above his shop. At night this is light-



Letter Head Used, Showing the Trade Mark of the Firm.

ed up and its real value as an advertising sign and the aptness of the adaptation are then fully evidenced. The star is used in many other ways. It appears in all advertising and on all the letterheads of the firm. Billheads bear the same emblem. As considerable advertising is done, including the use of

space on local theatre curtains, the public has become thoroughly familiar with the device and the earth's sister planet is noted chiefly in Calgary as the trade mark of "Marr's Plumbing and Heating Co."

The results of this ingenious scheme have been far reaching. Mr. Marr states that it has helped him largely, inasmuch as it familiarizes his name with the public more readily than any amount of cut-and-dried advertising. The electric star above his shop is familiar to all now and has drawn a great deal of business that way. "Mars inhabited?" a Calgary citizen is reported to have said. "Certainly, I hear the Marrs are looking for more men all the time."

Taking Up New Name.

Mr. Marr was one of the chief advocates of the change made in the name in the National Association and he is now proving himself one of the fore-



The Establishment of Marr's Plumbing, Heating and Lighting Co., at Calgary. In the Upper Right Hand Corner is Shown the Front of the Office and Residence, with the Three Generations in Front, the Eldest Grandson of James Marr, Senior, Standing at the Railing—Jas. Marr, Sr., is shown in the Upper Left Hand Corner.

most in putting the change into effect. As will be seen by the accompanying illustration of his shop, he has placed above his old sign, and immediately below the star, a new sign with the name "Sanitary and Heating Engineers," prominently displayed. The lettering is in white and the old firm name is therefore quite overshadowed. It will be removed altogether shortly.

Larger Quarters Designed.

It is intended shortly to move to larger quarters, as the business has grown too large for the present premises. A new store building 50 by 40 feet is projected.

Prospects Good Here.

Mr. Marr has been seven years in this country, and, although his speech still bears tribute to the fact that he hails from the "land of brown heath and shaggy wood," he has become one of the most enthusiastic of the citizens of the North-West. He believes wholeheartedly in the great future of that part of the country, and of Calgary in particular. His own business has grown rapidly since he first located in Calgary seven years ago, and it is constantly growing.

Mr. Marr was formerly in business in Glasgow, where he engaged in plumbing and heating work for many years. He states that conditions there are, in some respects, not entirely satisfactory. There is not the same scope for business development and expansion as he had experienced since locating in the West.

The special train left the Union depot at 9.30 and returned at seven in the evening. A large number of women and children went along and the committee served ice cream to them at the grove.

The reception committee consisted of M. F. Quinn, G. London, T. H. Stevenson and E. Smith; dancing committee, W. Kennedy, H. Mullins, J. Cassidy; racing committee, J. Barrett, J. Pollock, and J. Reason; railroad committee, J. Cinq Mars, J. Barrett, W. Kennedy and C. Smith.

The Programme.

The waltzing prize was awarded to Mr. D. Rae and Miss J. Rogers.

The baseball match between the Plumbers and the Fitters was won by the Plumbers by a score of 11 to 10.

Girls' race, 12 and under—1st, Muriel Dougherty; 2nd, Margaret Grimes; 3rd, Ellen Landreville.

Boys' race, 12 and under—1st, R. Prouse; 2nd, S. Barrett; 3rd, A. Groulx.

Young ladies' race—1st, Miss Keogan; 2nd, Miss Rogers; 3rd, Miss Powell.

Married ladies' race—1st, Mrs. Steele; 2nd, Mrs. Askwith; 3rd, Mrs. Burke.

100 yards dash, open—1st, C. Lamarche; 2nd, V. Lamarche.

Married members' race—1st, Mr. Patterson; 2nd, Mr. Quinn; 3rd, Mr. Smith; special, C. Askwith.

Apprentice plumbers' and fitters' race—1st, Puijoui; 2nd, Pollock; 3rd, Lee; 4th, Blais.

Single members—1st, Patterson; 2nd, Cote; 3rd, Kennedy.

Hop, step and jump—1st, McKnight; 2nd, Lamarche.

200 yards race for members of the union—1st, Mullen; 2nd, McKnight; 3rd, Patterson.

220 yards, open—1st, C. Lamarche; 2nd, McKnight.

A new public school is to be built at Areola, Sask.

Plans are being prepared for a \$5,000 library at Forest, Ont.

A new Salvation Army barracks is to be built on Princess street, Kingston.

Plans are being prepared for new fair buildings at Windsor to cost \$10,000.

A post office building is to be built at Macleod, Alta. Plans are being prepared.

Tenders are to be called at New Westminster, B.C., for two new schools, to cost in the neighborhood of \$45,000.

As a result of a by-law submitted to the ratepayers, the sewer commission of Berlin has recently been abolished. The city council has appointed a committee of its members to take over the management of the sewerage work.

Phone 4737 1010 12th Ave. W.



MARRS

2 GENERATIONS

OF EXPERT SANITARY, HEATING AND VENTILATING ENGINEERS

40 YEARS

Experience in our business is of value to you

8 YEARS

In the West has taught us its needs in

SANITARY	HEATING	VENTILATION BY
HOUSE	BY WATER	MECHANICAL
DRAINAGE	And STEAM	And Other Methods

References as to our ability may be had on application to

HEATING EXPERT J. MARR, Junr.		PLUMBING EXPERT J. MARR, Manager
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JOBGING ATTENDED TO PROMPTLY

Sample of Newspaper Advertising Done by Firm, Showing the Good Use Made of Trade Mark.

The letterheads of the firm have not been changed yet, as they have quite a stock on hand, but, as soon as the supply is exhausted, the word "plumber" will be displaced in favor of the newly adopted trade name. The billheads and office books bear the words "sanitary and heating engineering."

First Annual Picnic Held

Ottawa, Aug. 7.—The first annual picnic of the journeymen plumbers and steamfitters took place on Saturday to Chelsea and proved a great success. A good share of the success was due to the hard work of J. Cinq Mars, the secretary and Organizer Walters, who acted as judge of the races and dancing and who officiated to the satisfaction of all.

About four hundred in all went along.



Interior of Office of Marr's Plumbing, Heating and Lighting Co.



POINTS ON HEATING

by
CHAS. H. DENISON



Chapter 12.

Various expedients can be made use of when a man is in a tight place, or has an unusually difficult job to put in, if one will but use their brains. Recently there has come to this paper several inquiries in regard to the heating of radiators at the same level as the boiler. In the questions and answers, the amount of space available is limited and the questions are, of necessity answered somewhat briefly. For the sake of having something more at length and to refer to, I will describe a job that I put in a house in this manner some 25 years ago.

It is not a new idea to-day, but then in the part of the country where I happened to be, nothing of the kind had ever been seen and it was predicted that my job would never work at all. I had several steam heating jobs in the city in question and in the course of my butting around the place looking for more contracts (for I spent my evenings in that manner), I chanced upon a railroad engineer who had a three story and a basement residence. His wife kept roomers and they had decided that they would be in advance of the times (in those days, remember it was 25 years ago), and have the house heated from cellar to garret by steam heat.

So the engineer had been to every steam heating contractor in the town and obtained figures as to what the house could be heated for. That part of it was all right enough, but where the stick came in was that the engineer required that the basement be heated as the dining room was on that floor. He strongly objected to having any of the radiators strung along the ceiling and no one around there knew of any other way to get any results at all, for the average steamfitter at that time did not know much in regard to the working of steam traps and it might be said that he has not picked up very much knowledge regarding the same in all the 25 years intervening. Steamfitters and steam traps do not seem to "hook up" well for the reason that it takes too much knowledge on the part of the fitter. I am perfectly justified in making

that remark for not one steamfitter in five can apply a steam trap to a job, do it right and be sure of its working as it should. Many of them have but a rather indefinite idea of just what the steam trap is for, anyway, and that with books and catalogues in plenty (not to mention the information that has been cast adrift by the different trade papers on the subject). All for the mere reading, my steamfitter friend, and yet you allow the chance to get by you.

This engineer afore mentioned refused to have ceiling radiators; he refused to have a steam trap on the job. Said that he had enough contraptions to monkey with on his engine, and blamed if he was going to have a machine shop in his home where he wanted some comfort.

So the heating contractors were rather up against it as to the manner in which to get the heat into the dining room, upon which the whole problem hinged. I had made a date with the engineer to call at his house and look the job over to see if some way could not be devised in which the house could be easily and safely heated and at the same time accomplished in such a manner that any one could run the job. So, one eve the helper and myself went up to the house to measure up and find out just what there was to matters.

We found the residence built in the old-fashioned style, a wide hall and rooms on each side of same and that the kitchen and the dining room were on the same floor as the boiler would have to set; and that it would require about 140 feet of radiation to heat these two rooms.

The rest of the house does not matter for it was easy and done no differently than hundreds of other steam jobs in the country. We took the measurements and went down to our rooms to figure our way out of the difficulty. You'll please remark that I refer to the helper's going with me and measuring and returning to the room to assist me in the estimate. How many helpers do that to-day? This was 25 years ago

and perhaps we were behind the times in being so friendly with each other. Nevertheless, that was the manner in which we worked together and got results. I paid him fitter's wages and he was worth the price to me.

We decided to heat those two rooms (the kitchen and the dining room) by hot water, while the rest of the dwelling was heated by steam directly at a pressure of not to exceed one pound and so turned in the estimate for the job to work, or no pay.

We put a good figure on the work, I have forgotten the exact amount, but I do remember that it was quite a little in excess of the bids of the other heating contractors. The engineer came to me and said, "See here old man is this job going to work, or is it to be a fizzle?" I said to him, "if that job don't work, it will not cost you one darned cent, and moreover I will pay you for the trouble that you are to in allowing us to come to your house and inconvenience you in installing the job."

The contract was signed and when the boiler came we got it into the cellar. It was a sectional boiler, base, fire-pot, a ring, and then the steam dome.

We tapped an inch and one-quarter hole in the ring at the point where the ring would face up at the back against the wall (so as to have the hot water pipe out of sight. Then we ran a main pipe around to the two radiators in question (the dining room and kitchen) and simply piped them for hot water. The supply from the ring in the boiler was about eight or ten inches below the water line of the boiler.

Then the job was finished after the usual manner. Did it work? Sure it did. Couldn't do anything else and the two rooms in question were warm in the coldest of weather. This might be regarded as a difficult problem to-day, but as there have been various questions about the point, I thought best to give the matter some attention at length for the benefit of those who might have such a problem and not know where to look for the help in the matter.

Able Paper on the Question of Boiler Rating

Given Before the American Society of Heating and Ventilating Engineers by
Frank L. Busey, M.E.—A Vital Problem.

THE following article was delivered by Frank L. Busey, M.E., at the summer meeting of the American Society of Heating and Ventilating Engineers. It was decidedly one of the most interesting papers presented, as the boiler-rating question is one of the most vital now facing the heating trades. The illustrations are reproduced from "Domestic Engineering."

For small and medium-sized heating installations, steam and hot-water boilers and warm-air furnaces are used for the same class of work, depending on the requirements and the available funds. Each has its own advantages and its own advocates, so that there should be some common or comparable basis of rating, or of making a comparison of the results to be expected from the

and so arrive at a fairly accurate determination of what performance their product is capable. On the other hand, a considerable number of builders have no adequate means of conducting tests and would be unable to interpret the results in case such tests were made. These are the parties who are guilty of placing apparatus on the market which has a catalogue rating of two to three times what can be developed under normal working conditions. As a result the business is in an unsatisfactory state as regards ratings, and the crying need of the trade is for some uniform system whereby the heating capacities of the various types of boilers and furnaces may be approximated from the design and dimensions of the unit under consideration.

sequent variation in efficiency may invalidate such a system. As a matter of fact, the amount of surface required may vary anywhere from 5 to 50 sq. ft. per horse-power, depending on the conditions mentioned.

Various forms and combinations were tried and discarded and it was finally decided to use the term horse-power as the unit of heating effect, as applicable to both steam boilers and warm-air heaters. Taking the A.S.M.E. standard of 34.5 lb. of water evaporated per hour from and at 212 deg. F. as equivalent to one boiler horse-power, we have 34.5 by 970.4 equalling 33,479 B.T.U. as also equal to one horse-power. In the case of the boilers, the equivalent evaporation from and at 212 deg. F. per hour divided by 34.5 gives the horse-power developed. With the warm air furnaces the pounds of air-heated per hour multiplied by the rise in temperature and the specific heat of air, gives the number of B.T.U. delivered per hour to the air. This in turn divided by 33,479 gives the horse-power developed by the furnaces.

Having determined the total horse-power developed by the various units tested, the next step was to find some dimensions, relation, or ratio, to which the horse-power developed could be referred, and so obtain a unit to which the horse-power would bear some definite relation. It was found that the horse-power developed upon each square foot of grate by one pound of dry fuel burned per hour on each square foot of grate surface was remarkably constant. This is true for any one boiler or furnace when burning dry coal per square foot of grate per hour between the limits of 4 to 8 lb. for small units and 5 to 10 lb. for the large units, and when using coals of a similar quality. This is shown very clearly in Figs. 1 and 2 for two separate units, each using two classes of fuel. This value, termed a horse-power constant, and designated by the letter K, was obtained for each test analysed, by dividing the horse-power developed by the grate area, and this quantity in turn by the rate of combustion. Since frequent reference will be made to the grate area and the rate of combustion for any one heating unit, these terms will be designated by the letters G and F respectively.

While K was constant for any one unit and for a similar quality of coal, yet different units gave different values of K. It was found that the higher values of K were obtained from units having a greater number of square feet

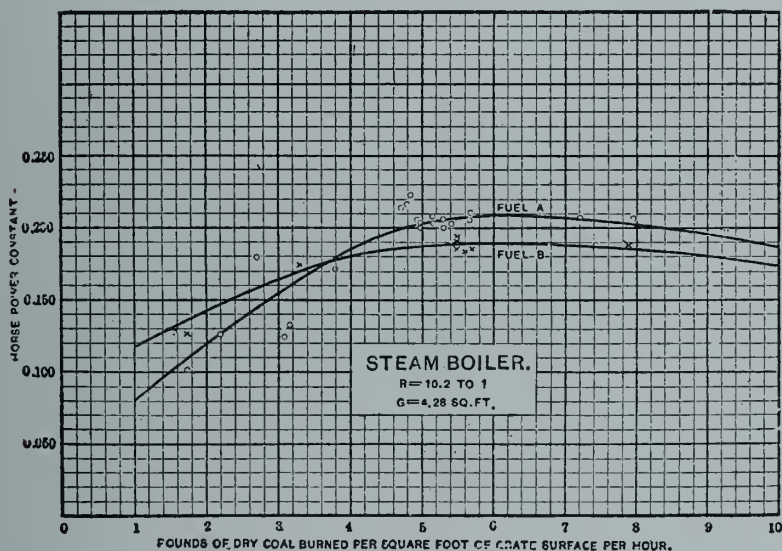


Fig. 1.—Relation of Horse-Power Constant to Rate of Combustion.

various units. This rating should be expressed in some small quantity, in order that it be easily handled and comprehended. It should be, if possible, in some well-known and established term, such as the American Society of Mechanical Engineers' standard horse-power, universally used in referring to large power and heating boilers. Heating installations will usually range between 2 and 50 h.p., where the installation is intended strictly for heating purposes.

The question of a fair and proper rating for house-heating apparatus has often been discussed, without definite results and the need of a solution to the problem is sorely felt by all who come in contact with the boiler and furnace business. Some manufacturers are equipped to test their boilers properly,

An appreciation of this need has led the writer to turn his attention to the rating question, with the result that a number of interesting conclusions have been derived. These results will be presented herewith, together with the methods by which they were obtained. A study was made of several hundred tests made by the University of Illinois Engineering Experiment Station on various types and sizes of small boilers and furnaces, and also of tests made on other and larger units, the results of which could be relied upon.

The practice of using 10 or 12 sq. ft. of heating surface in a boiler as equivalent to one horse-power is hardly warranted in house-heating boiler work, since the rate of combustion, ratio of heating surface to grate area and con-

of heating surface for each square foot of grate, this number being the ratio of the total square feet of heating surface to the square feet of grate. This ratio will be designated by the letter R. For a similar quality of coal, the values of K from the different units were then

It is customary in order to get the same heating effect, to build warm-air furnaces with a much greater value of R than is used with steam and hot water boilers. This is on account of the fact that more heat can be transmitted through one square foot of heating sur-

The general relation of the curves A, B and C for furnaces and curves B and C for boilers is seen to be very similar, the better fuels giving the higher efficiencies. This difference increases slightly as the value of R increases. An increase in the value of R is accompanied by an increase in the value of K only in so far as the value of R is confined to the limits found in practice. These limiting values of R for boilers in which this relation was found to hold are between 8 and 15. This range for furnaces, however, is from 15 to 38. It is quite probable that the higher value of 15 set for R in the case of boilers can be increased to 20 or even above, but it was impossible to obtain sufficient data to prove absolutely this point. Nevertheless, indications are that this is the case. There would eventually come a point where the temperature of the flue gases would be reduced to so nearly the temperature of the surrounding water or air that no further gain would be effected by increasing the radiating surface.

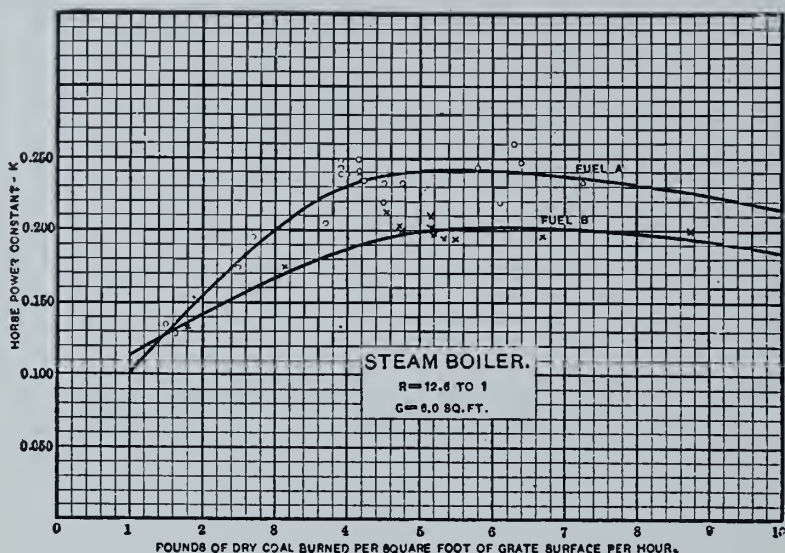


Fig. 2.—Relation of Horse-Power Constant to Rate of Combustion.

plotted to the corresponding values of R, as shown in Fig. 3. It is seen that there exists a very definite relation between the values of K and R.

This relation appears reasonable, for other conditions being equal, higher efficiencies will be obtained with higher values of R. Thus in practice it is customary to use additional sections, resulting in higher values of R, and also greater capacity. The relations between K and R was found to be independent of the size of the unit tested, inasmuch as increase in size is usually accompanied by an increasing value of R. This accounts for the higher efficiencies obtained from large units.

It is well known that the use of various grades of coal results in different efficiencies in the same unit. From a study of the tests made it was found that the coals used could be divided into three general classes, designated as classes A, B and C. Class A includes anthracite, coke and semi-bituminous coals. Class B includes good grades of bituminous coal, such as is mined in Williamson, Franklin and Saline counties of the southern district of Illinois. Class C includes the poorer grades of bituminous coal. We have already seen that when using any one class of coal a definite relationship exists between K and R. Although different values of K are obtained when using the different classes of coal, yet each class has its own definite relation between K and R. This is well illustrated in Fig. 3, where the three curves refer to the different classes of fuel.

face to water than to air. Tests show that in warm-air furnaces R must be from two to three times as large as in boilers to give the same efficiency, and corresponds very closely with practice.

As a result of these facts K does not bear the same relation to R in furnaces as in boilers, due to the greater value of R necessary in furnaces to obtain the same value of K. It follows that the relation of K to R varies, not only with the different class of fuels used, but with the different type of heating unit, being clearly shown in Fig. 3.

Fig. 3 shows the relation between the horse-power constant K and the ratio of total heating surface to grate area R.

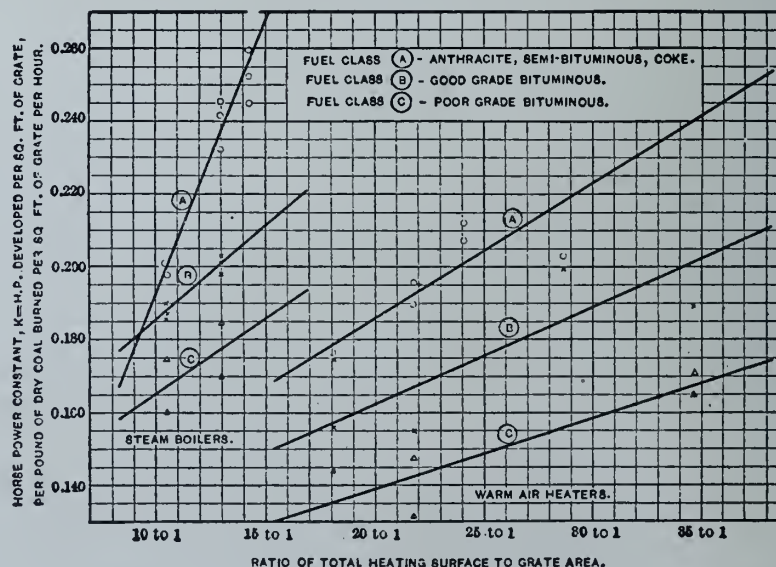


Fig. 3.—Relation of Horse-Power Constant to Ratios of Heating Surface to Grate Area.

Conclusions.

(a) Any basis of rating selected for heating installations should be equally applicable to steam and hot water boilers and to warm-air furnaces, as they are used for similar requirements.

(b) A unit of rating should be of such a character that it may be easily expressed and comprehended, of some standard form that may be compared to that used for power-boiler rating.

(c) The term horse-power as used in the A.S.M.E. rating for power boilers is a measure of heat delivered, is applicable to both boilers and furnaces, and fulfills better than any other term the above requirements.

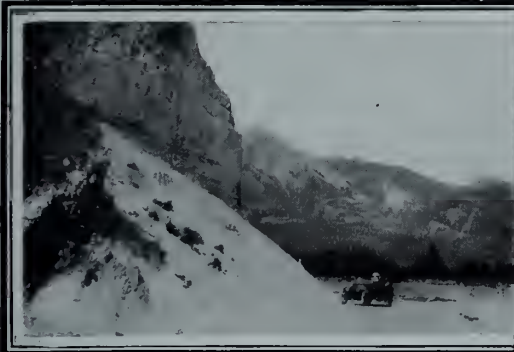
(d) The heat generated, or the power developed, on each square foot of grate by the combustions of one pound of fuel

on that square foot of grate, has been found to be practically a constant, under the conditions as already outlined. This is true of both boilers and furnaces.

(e) This constant bears a definite relation to the size of the heating unit, as expressed by the ratio of its total heating surface to grate area. Based on the results of actual tests, this relation can be expressed by a simple formula and the above constant determined for different units and sets of conditions.

Through the Rockies In a Motor Car

E. J. Young, of Calgary, vice-president of the Canadian Society of Sanitary and Heating Engineers, has been enjoying some experiences of a very unusual description. He was one of the first motorists to penetrate with his car into the Rocky Mountains and, as may be supposed, the trip was one full of thrills. In sending on a number of photos taken on the trip, Mr. Young writes:



"Enclosed you will find a few photos taken on a trip to Banff in the Rockies on the new government auto road, just completed. The occasion was a run by the Calgary Auto Club. The Dominion Government have granted permission for autos to run into Banff this summer for the first time, so that this was the first appearance of cars into this beauty spot, the national park. The ladies of the party got their full share of thrills. At times the narrow road is cut into the side of the mountains with only a few inches between the auto wheels and a straight drop of may be a thousand feet. I mention this because it might interest those who are coming out to our next convention at Calgary, and this will, no doubt, be one of the side trips for the delegates. The roads are first-class"

The views shown were taken by Mr. Young himself, the car being his new 40 horse-power White gasoline car, containing his wife and son and a party of lady friends.

Going to Coast.
Mr. Young left last week for British Columbia and will remain in Vancouver and Victoria all of the present month. He will combine business with pleasure and take some steps toward the improvement of trade conditions in that province. One of the matters attended to will be the appointment of a provincial vice-president for British Columbia.

Municipal Undertakings.

It is proposed to spend \$7,000 on sewers at Halifax.

Waterworks system is to be installed at Southampton, Ont.

By-laws are to be submitted to the ratepayers of Ottawa in September to provide for new equipment at the waterworks.

The city of Brandon has been recommended in an engineer's report to install a sedimentation basin. The form

Views taken by E. J. Young, Calgary, on the occasion of the first automobile trip taken into the Rocky Mountains at Banff.

of basin recommended is one consisting of two parts, each with a capacity of 2,340,000 gallons, and to be filled by centrifugal pump.

General Buildings.

A new hotel is to be built at Dauphin, Man., to cost \$50,000.

The Independent Tire Co. will build a \$35,000 factory at Guelph, Ont.

The Guelph Herald is to build a new building in Guelph, at a cost of \$27,000.

The ratepayers of Drayton carried a by-law to loan \$4,000 and give free site to the Canadian Flax Mills.

Private garages are being erected by the following in Montreal: R. H. MacDonald, Cote Rd., Westmount, \$275; J. O. E. Blackwell, Roslyn avenue, Westmount, \$300; Hiram L. Piper, Arlington street, Westmount, \$600; A. G. Beyers, Belmont street, Westmount, \$500; J. H. Hand, Belmont street, Westmount, \$400; W. H. Creed, 630 Roslyn avenue, Westmount, \$1,000. The following buildings are in the course of construction in Westmount; M. A. A. A., 250 Peel street, is building a large club house, \$75,000, reinforced concrete; contractors, Atlas Construction Co.; The Steeling Press, Ltd., concrete and brick, \$9,000; W. K. Graffety, Elm avenue, residence, stone and brick, Sydenham avenue, \$11,000; W. J. Munroe, 332 Grosvenor avenue, residence, concrete, stone and brick, \$12,000. Mr. Gouin, Bellevue street, Westmount, residence, \$4,000; Mr. Williams, 494 Elm avenue, residence, stone and brick, Mount Pleasant avenue, \$5,500; Mr. G. H. Hand, Lansdown street, residence, \$18,000.

NEW WESTERN INDUSTRY.

Vancouver, Aug. 8.—With instructions left for his local agent to start without delay upon his plans for the construction of a manufacturing plant for his gas machines, L. B. de Laitte, the prominent French inventor, departed for Calgary, en route to Chicago, where he will inspect his factory at that place before proceeding to France. Mr. de Laitte will spend but little time in France, for he expects to visit his various European factories before sailing for Australia during the latter part of the year. He will return to Vancouver from the Antipodes in March, 1912, by which time he expects his local factory will have been completed and in working order.

IN THE EAST.

William C. Peck, representing the John Krodell Co., brass manufacturers, is making a trip through the Maritime Provinces.

Standardization of Ordinances is Strongly Urged

Chairman of Sanitary Committee of C. S. of S. and H. E. Writes with Reference to this Vital Problem—Concerted Action Needed and Discussion is Therefore Welcomed—The Question will be Up at Next Convention.

THE question of the standardization of ordinances is undoubtedly one of the most vital facing the trade at the present time. The necessity for action along this line has been felt for many years and is recognized in all countries. Little has been done, however, to bring about the desired end.

Canada is peculiarly in need of a standard. The wide extent of the country, the many races represented in the population of the Dominion, tend toward wide divergencies in practice and theory. Work is done vastly different in various sections of the country. What is considered proper and sanitary in one place is harshly condemned elsewhere. The result is that members of the trade frequently find themselves at a loss when they move from one part of the Dominion to another. They have to learn over how to do work in which they believed themselves to be highly proficient. Another disadvantage is that difficulty is found in procuring efficient help. A journeyman who has been accustomed to doing work as it is done in the place he comes from, has to change his ideas and methods when he goes to another province and obtains employment there. And, until he "gets on" to the new order of things, his boss will not find his services in any sense valuable.

These are just a few of the disadvantages which arise as a result of the lack of national standards. Many others might be mentioned if space permitted. They are all familiar to members of the trade and do not, therefore, require rehearsing. Suffice it to say that a standardization of ordinances would be a benefit to the trade not from one, but one hundred, standpoints.

To bring about the desired changes along this line, concerted action will be found necessary. If members of the trade in all parts of the country bring pressure to bear and point out the need for national standards, it will not be long before action is taken. It is a fact, however, that the movement must be started within the trade. If the members do not better themselves, it cannot be expected that outsiders will.

In the following letter, James Marr, sr., of Calgary, chairman of the Sanitary committee of the Canadian Society of Sanitary and Heating Engineers, gives his views of the question. Other opinions are solicited. Plumber and Steamfitter will gladly give space to letters bearing on the problem, believing that public discussion will help to bring matters to a head.

Mr. Marr's Letter.

"Editor Plumber and Steamfitter:—In the matter of the Standardization of Sanitary Ordinances for the Dominion of Canada as they relate to the supply of pure water, house drainage, and the disposal of sewage in all cities and towns.

"In my opinion at no more opportune time in the history of the world since the fall of the Roman Empire could such ordinances be made national in character at small cost and to the everlasting benefit of our nation than the present. The arts and crafts of sanitary science which have been dearly acquired by the British Isles and the United States of America may be produced for our nation by the adoption of a national standard of ordinances at small cost, immediate action should be taken, as a new town is springing up in the West every other day. Start along right lines. To begin with no one can say nor even approximate the saving to life and property but we can imagine what a boon and a blessing such an ordinance would have on our great Dominion. After 40 years of practical experience in the arts and crafts of sanitary science, I can speak from experience of the need of standardization. Take the situation as it stands to-day. Every man you meet has a pet theory of his own as to how he would draw up an ordinance. The Irishman just out from Dublin has an ordinance drawn up from what he learned by practice, but never put himself in the way to learn why it should be done that way. Again you have a Scotchman who probably comes from some small town where every man is a law unto himself, but who has acquired a knowledge of the ways by study of how sanitary ordinances are drawn up, and you have the man from Missouri who knows it all and whom you cannot teach, as he has probably reached what he believes the perfection point in sanitary science. You also have the Englishman, who is brimfull of old traditions in the plumbing craft and would almost persuade you that there was no way but his way of doing things. Of such is our cosmopolitan make-up, but Canada has a way of doing things. Let her rise to the occasion and show to the civilized world what she can do to protect the lives and substance that is so precious to her growth. That I may some day in the near future have my dream realized is the prayer of yours to command. J. Marr.

"That the members of our craft take this matter up is the earnest wish of

the Convenor of the Sanitary Committee of the Canadian Society of Sanitary and Heating Engineers."

At Next Convention.

Another member, in discussing this problem recently, said: "In my opinion, the standardization of ordinances should be made the leading topic at the next convention. To make this possible, however, it will be necessary to bring the problem to the attention of the trade. The more discussion we have between now and next June, the more fruitful the proceedings at Calgary are likely to prove."

PLUMBING TESTS AT UNIVERSITY.

In a letter from H. Y. Carson, of the University of Illinois, at Urbana, Ill., to John D. Blake, of Rock Island, Ill., regarding plumbing tests which have been made on the stack erected at the university this spring, he makes the following observations: "The relation between the vacuum or the back pressure and the distance from the base of a tall vertical 4-inch stack was determined accurately. It was found that on ordinary fittings used at the base of a stack a considerable back pressure was produced on seals of unvented traps, attached at or near the points where the vertical stack entered the horizontal run. A special fitting was then designed to prevent back pressure occurring in the stack. The fitting successfully takes care of the same. In addition to the glass observation windows, which were shown on the print sent you some time ago, sections of 4-in. glass pipe have been successfully inserted into the stack at different places, and a careful study has been made of the way in which water flows in both horizontal runs and in vertical soil stacks. A means was also devised for determining the velocity of water passing down a vertical soil stack, and velocities have been determined for varying quantities of sewage in the stack. Another interesting question, the solution of which we have attempted, is the relation between the amount of vacuum produced on traps which are erected at varying distances from the soil stack into which they are connected and into which fixtures located on floors above discharge their contents, and the distance from the stack. It was found that varying distances, greater than 36 inches from the stack, caused little or no change in the amount of vacuum produced by such means on seals of traps."



The Question Box



Subscribers are Urged to Send Questions to be Answered, or to Comment on Letters Published. Descriptions of Jobs Done or Shop Kinks are Also Invited.

HOT WATER NOT WARM ENOUGH.

Editor, Plumber and Steamfitter,—I am sending you a sketch in which we do not get enough hot water for the size of the heater nor the fire that is kept constantly going in same. Will you please point out what is the matter

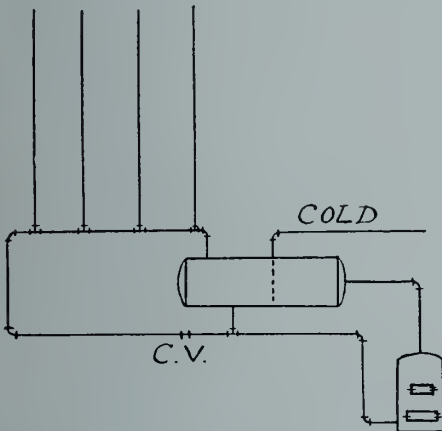


Fig. 1.

with the job. Do you think that the check valve has anything to do in the matter?

John Bekings.

Vancouver, August 6.

Looking over the sketch forwarded, Fig. 1, we do not see how the check valve would have the effect of causing a scarcity of hot water. We should imagine that the cause was due to the rela-

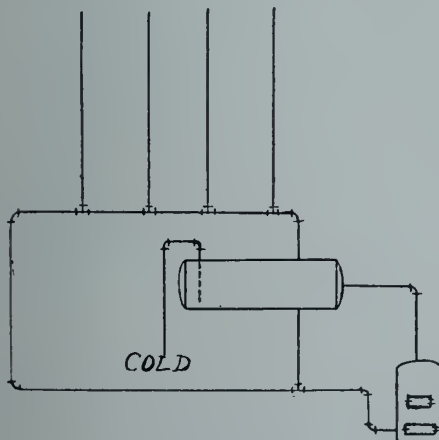


Fig. 2.

tive position of the cold water supply and the hot water outlet on the tank. In Fig. 1, the cold water tube drops down into the tank between the hot water supply from the boiler and the outlet from whence the hot water goes to the circulating pipe and so on to the faucet. Now when a cock is opened, the cold water rushes in and mingles with the hot water, reducing its temperature somewhat.

In Fig. 2, we have shown a somewhat different manner of "hooking up" the job and one that we believe will work successfully. Also one can see that the check valve has been omitted entirely from the second job. Of course the straight lines leading upward are only placed, relatively. They might run differently; but the main point is with the circulating pipe and the manner in which the water enters and departs from the tank.—D.C.H.

BOWL STAINED AND CAKED.

Editor, Plumber and Steamfitter.—In one of my customer's houses there is a closet bowl which is quite badly stained up and also has a crust on it as high as the water stands when the closet is not in use. Is it not possible to remove same without scratching the enamel badly. How can I get it off so that the bowl will look all right?

Toronto, Aug. 10.

J.C.G.

Remove the water from the closet bowl by using a sponge. Then take a mixture of four parts hot water and one part hydrochloric acid and pour in enough so that it covers all the stained or caked portions of the closet bowl. Allow the mixture to stand in the bowl about one and one-half hours then flushing the bowl.

It will then be found that most of the stains and crusts can be removed. If some remain, make a second application of the mixture. The prevention of this nuisance is far easier than the cure. Many housekeepers are very careless in regard to cleaning the closet bowl. The application of an old whisk broom to the inside of the bowl two or three times a week, beginning when the bowl is new, will prevent the accumulation of the unsightly deposits.—D.C.H.

POSITION OF RANGE BOILER REQUIRED.

Editor, Plumber and Steamfitter,—I have a plumbing job to do in a short time where it is impossible to locate the range boiler at the side of the kitchen range. If I place it in the corner, I shall have to go under a window, a drop of at least eight inches. I could go over the window, or drop clear into the cellar. Which manner would you advise me to use in doing the work?

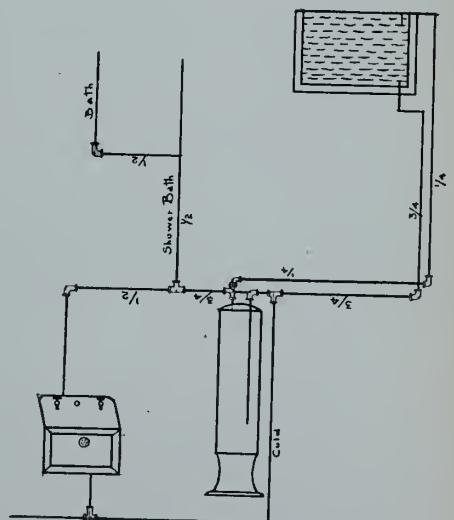
Sherbrooke, Aug. 2.

O. P. A.

We should advise against going under the window or the floor, as it would be almost sure to result in an air pocket which would give you any amount of trouble. The better way would be to go over the window and drop into the top of the range boiler. You can put a tee at that point, one part of the tee being used to supply the pipe to the fixtures (hot water) thus giving a quicker pull on the water front and hot water quicker.—D.C.H.

ANOTHER SOLUTION.

Editor, Plumber and Steamfitter.—It happens that I had to deal with the same trouble as John Duellier, Winni-



peg, which was dealt with in your issue of August 1. Here is what I did. The hot water would come out of the different taps so slowly that it would take

about half an hour to fill up a gallon measure. After having tried everything imaginable, I finally came to the conclusion that an air pipe might solve the difficulty. So I connected a $\frac{1}{2}$ in. pipe from the top of the boiler on the hot water pipe to the tanks in the attic, to let in some air, as shown in the drawing. The system has given entire satisfaction ever since.

A. Birrette.

Lachine, Aug. 7.

CUT-OFF PATTERN.

Editor, Plumber and Steamfitter.—Will you please publish through your columns some method to obtain the patterns for a rainwater cut-off for either 3 in. or 4 in. conductor pipe, or let me know where they can be purchased.

W. D. Yelf.

Caledonia, July 24.

The cut-off can be bought from any first-class jobber in tinsmithing sundries. The best and simplest one that I have observed is cut into conductor pipe and swings upon two pins in such a manner that when it is closed, the pipe appears to be whole and the water can descend as usual. When the cut-off is in operation, it is swung down and blocks the pipe, throwing the water out from the side of the pipe. It does not

strike me that they are at all expensive.—D.C.H.

RUST IN TANK.

Editor Plumber and Steamfitter:—I installed a black steel storage tank connected to a heater which, by the way, is used for bathing purposes. This job works with perfect satisfaction, as far as hot water supply is concerned, but I find that although it has been in use for some 6 weeks the color of the water still continues to be rusty looking, I would be very glad if you could suggest a remedy for this—through your most interesting paper.

Vancouver, July 31.

RUSTY WATER.

From the description, should say that the tank was dirty when first connected and the rust may disappear in due time. If there is a man hole on said tank, the party can possibly clean out the tank with some soap and water. If not, flush it out as well as can be, hammering the sides of the tank to dislodge any scale. If it still shows rusty water, the appliance known as a "Compound Injector" would undoubtedly soften the water in such a manner that no farther trouble would result. The address of the firm making this "Compound Injector" can be obtained at this office.—D. C. H.

He stated that the master plumbers wanted more protection and they would in turn protect the citizens from the installation of poor fixtures. He also stated that the suggestions, which he presented to the committee, were compiled after consulting the laws which govern other cities, and he thought they would be suitable for the City of Moncton.

Other speakers were: Eli Brooks, L. H. Estano, G. R. Parker and Wm. Watson.

The committee decided to go over the suggestions carefully before reaching any decision.

Some of the Suggestions.

Some of the principal suggestions submitted by the master plumbers will be found below:

No person, firm or corporation shall hereafter engage in or work at the business of plumbing or gasfitting in this city, either as master, employing or journeyman plumber unless such plumber, firm or corporation receives a license therefor from the Board of Works, or holds a license from some other town.

Any person desiring to engage in, or work at the business of plumbing, either as a master or employing plumber, or as a journeyman plumber, shall apply to the Board of Works at such time and place as the Board of Examiners hereinafter mentioned may designate, to whom said application shall be referred. In case of a firm or corporation, the examination and licensing of any one member of the firm, or manager of the corporation, shall satisfy the requirements of this ordinance.

There shall be a board of examiners consisting of the city engineer, a member of the Board of Works, the inspector of plumbing, and a fourth member who shall be a practical plumber, who shall be appointed by the Board of Works for the term of one year, and who shall receive such compensation per day each day of actual service as the Board of Works may determine, but not to exceed \$5 per day.

Said Board of Examiners shall meet and organize by the selection of a chairman, and shall then designate the time and place for the examination of all applicants desiring to engage in or work at the business of plumbing within the city.

The Board of Works shall appoint an inspector of plumbing who shall be a practical plumber of at least five years' experience.

Plans for plumbing or alterations must be filed by a master plumber. Said master plumber must have a place of business separate from all other business and must have a sign and stock of not less than \$500.

New Regulations are Demanded in Moncton

Master Plumbers Want Board of Examiners Established in That City and Regulations as to Filing of Plans—Deputation Meets Council Committee.

Moncton, N.B., Aug. 2.—A special meeting of the Board of Works was held last evening, when the following letter was considered:

To His Worship, the Mayor and Aldermen of the City of Moncton:

Gentlemen:—

We, the undersigned master plumbers of this city, respectfully request that we be given the privilege of meeting a committee of your council, for the purpose of discussing and arranging new plumbing regulations in the interest of the general health of our city.

Yours respectfully,

(Signed)

Wm. Watson.

Sumner Co.

L. H. Estano.

H. G. Hagen & Co.

Eli Brooks.

A Deputation Heard.

A deputation of master plumbers was present and an opportunity was presented of giving their views. The first speaker was Geo. Dorman, who represented the Sumner Co. He stated that they had asked for a hearing in the best interests of the city. The improvement of sanitary conditions was what they desired. They had no fault with the laws enacted some years ago, but the city had grown considerably in the last few years, he thought they should have better sanitary conditions than they have at the present time. He stated that in other Canadian cities and in the United States they changed their sanitary conditions as the cities grew. The present conditions, while the law is carried out are not of the best, as they found people living in dwellings that are unsanitary and the plumbers were in a position to help them out.

He stated that there were men who worked in the new I.C.R. shops by day and after work would go round to different buildings and do plumbing work. "We feel," he said, "that the Board of Works should be more strict with the plumbers, and if these laws were enforced the master plumbers would have to come before the Board of Works to be registered."

Journeyman Plumbers Hold Annual Outing

Toronto Men Go To Berlin in Full Force—Bosses Sustain a Terrific Beating at Baseball—Other Points of Particular Interest.

(By Staff Correspondent.)

BERLIN, July 31.—The eighteenth annual picnic of Local Union 46 of the United Association of Plumbers, Steam and Gas Fitters, from Toronto, was held here on Saturday. The excursion was one of the largest ever conducted under the auspices of the union and it was in every way a huge success. Probably five hundred in all took in the trip, there being a good percentage of the fair sex in that number.

The excursion went by C.P.R. to Galt, where a change was made to the trolley system and the journey was continued to Berlin in that way. The cars went right to Victoria Park, arriving there about eleven o'clock.

The big event of the day was the baseball match between the boss plumbers and the journeymen, which took place just as soon as the committees could get out the bats, balls and other warlike apparatus. It was expected that a hot battle would ensue, but the bosses failed somewhat to come up to expectations. They showed, in fact, a weakness both at bat and in the field, which made the game resemble a procession more than anything else. Dan Glynn started in the box for the bosses with Dave Menzies behind the bat, and the journeymen found no difficulty in wafting his choicest offerings to all corners of the lot. It is only fair to state that the support accorded Dan was of the wierdest variety. There were so many gaps in the infield that the puniest roller got through unmolested and the outfield established a new record for muffed flies. When the journeymen were finally retired, the bosses were too tired to make any runs on their own account. A delay was caused at this point by the refusal of Scorer Frankland to go ahead unless he were supplied with an adding machine. Even with this help he found it hard to keep track of the runs which came in. The bosses gave him little trouble, however.

Needham went into the box after that and things steadied down a little. The journeymen continued to collect runs, however and at the end of the fifth innings, it was decided to call matters off. The score is said to have been something like 18 to 2, but no one knew for certain.

The teams were:—

Journeyman—W. Jacks, c.f.; R. Byrne, p.; E. Byrne, c.; W. Fletcher, l.f.; J. Woods, 2b.; H. Griffiths, 1b.; S.

Pitcher, 3b.; D. Ratteray, r.f.; A. Ratteray, ss.

Boss Plumbers.—Fred. Smith, c.f.; Jack Cracknel, l.f.; Chas. Hicks, 3b.; Ed. Needham, 1b. and p.; Wm. Schultz, m.; Dave Menzies, c.; A. McMinn, 2b.; R. Stevenson, r.f.; Dan. Glynn, p.

In the afternoon a programme of sports was run off, the list of events including:—Girls' race, under 12 years; boys' race, under 12 years; single ladies' race, 75 yards; married ladies' race, open to all; married ladies' race, 75 yds., members' wives; children's races; helpers' race, 100 yds.; 100 yds. race, open to all; employers' race; journeymen's race, Local 527; hop, step and jump, open to all; journeymen's race, married, Local No. 46; Journeymen's race, single, Local No. 46; putting the shot, U. A. members and helpers; running broad jump, open to all; nail driving contest, ladies only; tug of war, Local 527 v. Local 46.

The Return Trip.

The cars left Victoria Park for the return at 7 o'clock, and a good trip ensued, the train arriving at Union Station in good time.

Everything passed off successfully and much credit is due the committee for the way in which they carried out the arrangements. The committee in charge was:—F. W. Jenkins, N. Ferguson, A. Fyfe, W. Fletcher, J. A. Rattray, J. E. Wood, C. D. Bowbeer, D. Rattray, W. J. Bailey, D. Bulloch, Jas. Dunlop, chairman; W. J. Storey, secretary.

Excursion Notes.

A number of photographs were taken for Plumber and Steamfitter but, owing

to the dullness of the day, they did not prove good enough unfortunately for reproduction.

A. F. Passmore says that he will play himself next time.

Ice cream cones were passed to everyone on the train on the way up.

"Guess, we've all seen better days," said Dan Glynn.

W. J. Storey was sorry he had chosen a seat so close to the diamond when a hot liner connected with a tender part of his countenance.

Umpire Ainsworth had less trouble than some professional "umps."

Public Buildings.

Additions are to be built to the fire hall at Wetaskiwin, Alta.

Plans are being prepared for a Sailors' Institute at Port Arthur.

Plans have been accepted for the new Y.M.C.A. building at Saskatoon, which is to cost \$36,000.

The congregation of Holy Trinity, Welland, are contemplating the erection of a new edifice.

Plans are to be drawn at once for the new St. Andrews Church at Regina. The cost will be \$100,000.

A by-law will be voted on at Prince Albert, Alta., for the erection of an eight-roomed public school.

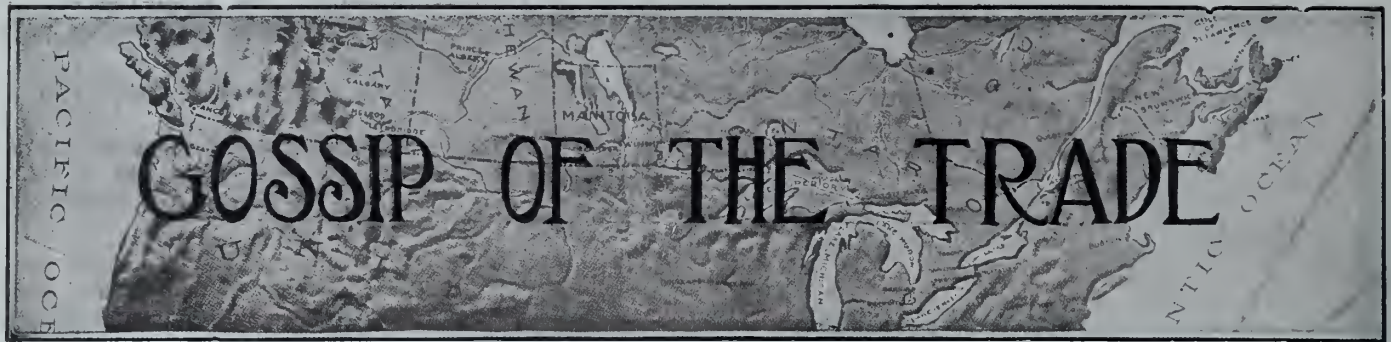
The sisters of St. Mary's Hospital, New Westminster are contemplating the addition of a wing, to cost \$20,000.

The Government buildings at Victoria, B.C., are to be extended at a cost of \$750,000. Two new wings are to be erected.

News Briefs.

C. E. Stanch, of the firm of Anderson & Co., Fort William, was called to Berlin last week to attend the funeral of his father, who had passed away there very suddenly.





Recovering From Operation.

Henry Barrett, plumber for R. C. Puddicombe, Ayr, has just recovered from a serious operation, and is expected to be able to resume his duties in a short time.

Company Incorporated.

James C. Orr, plumber; G. A. Elliott, barrister; B. L. Deacon, barrister; A. C. Miller, accountant, and Roy Wydeman, student-at-law, have formed the J. C. Orr Co., Ltd., with a capital of \$20,000, to carry on a general plumbing and heating business. The head office of the concern is in Winnipeg.

Are Pretty Busy.

Donald & Thompson, Lumsden, Sask., have secured the following contracts this week:—Hot water heating, plumbing and iron work on A. Morton's house on the south plain; hot water heating for Jos. Barnes' house, near Silton, also plumbing in the houses of Jas. Street, Belle Plain, and Mr. Webb, Cottonwood. They have also secured the heating and iron work on the C. P. R. station at Craven.

Gave a Banquet.

Fred Armstrong, president of Ward Four Conservative Association, Toronto, banquetted the members of the committee that arranged the details of the association's big picnic to Queenston Heights. The dinner was held in the Hotel Falconer, and with Mr. Armstrong at the head table were:—Hon. George E. Foster, Edmund Bristol, K.C., M.P., W. K. McNaught, M.P.P., and Alex. Wright.

Here's One Way.

A plumber chap in one of our smaller towns appends this note at the bottom of all statements of accounts sent out: "All persons knowing themselves to be indebted to me are requested to call and settle. All those indebted to me and not knowing it, are requested to call and find out. All those knowing them-

selves to be indebted to me and not wishing to call, are requested to stay in one place long enough for me to catch them. All those not indebted to me are requested to call and become indebted.

Getting Work in West.

Bernhardt & Gies, Preston, have nailed 3 more plumbing and 2 hot air jobs in Medicine Hat in addition to the big contract recently secured. Mr. Gies with 4 plumbers and 2 painters, leave shortly for the western city.

Those in Attendance.

Among the Toronto master plumbers who attended the picnic at Berlin, were: Geo. Cooper, D. Glynn, sr., A. F. Passmore, H. Hicks, T. Riley, J. Scott, W. Boddington, T. Willis, J. Jackson, J. Fullerton, F. Nixon, A. Lowry, J. Peacock, G. F. Frankland and the members of the ball team.

Twenty Years Ago.

In the "Twenty Years Ago" column of the Vernon, B.C., News, the following item occurs:—"W. J. Armstrong, 'the tin and stove man,' of Spallumcheen, is erecting a store 22x40 ft., and two storeys high on his property at the corner of Vance and Coldstream streets. S. Bowell, of Enderby, is the contractor and the estimated cost is \$1,600."

To Get Advice.

Expert advice on the present condition and practicability of extending the city's system of steam heating will be secured by the St. Thomas council before any further extensions are made. At a special meeting of No. 5 Committee Tuesday evening, Chairman Price said the council should decide whether to extend or curtail the service, but a proper decision could not be reached until the whole matter had been gone into by men who know the ins and outs of the whole business.

To Build New Store.

Revelstoke, B.C.—F. H. Bourne, of Bourne Bros., plumbers and dealers in

hardware, states that they are figuring on putting up a new store building on First street west. The intention is to put up a handsome two-storey building of brick and cement, to be used for store purposes solely. Whether he will do so this year depends upon certain circumstances. Owing to the lateness of this season he was not sure whether it would be advisable to start this year. In the meantime, however, the occupants of the buildings now on the ground have been given an intimation that at any time they may be required to move off.

News Briefs.

Henry Barrett, plumber for R. C. Puddicombe, Ayr., has just recovered from a serious operation, and is expected to be able to resume his duties in a short time.

Adopts New Name.

J. A. Coslake, of Collingwood, has been one of the first to adopt the new

Collingwood, Ont. 191

M

In Account with
J. A. CASLAKE
SANITARY AND HEATING ENGINEER AND SHEET METAL WORKER
MURDOCH STREET, OPPOSITE CLOW HOTEL. TENDERS

trade name. He has had his letter heads changed to read: "Sanitary and Heating Engineer and Sheet Metal Worker."

Firm Busy.

Hamilton & Stott, St. Thomas, have completed the plans for installing an underground tile conduit steam heating system in Strathroy. This heating system is the same as the system which they have installed in London for the Helena Costume Co., and also the same system as is installed in St. Thomas, with the exception that the St. Thomas system has no return pipe back to the plant, which is a great loss to the heating system. The London system is entirely satisfactory. They are also laying out a plan for the town of Stratford for the same system.

News of the Manufacturers and Wholesalers

COMPANY INCORPORATED.

The Canadian business of the J. L. Mott Iron Works, New York, has been taken over by the "Mott Company, Limited," Montreal. The officers of the new concern are:—Pres., Augustus W. Mott; vice-pres., Edward Hammann; manager and treasurer, W. J. Wall; secretary, E. E. Snowdon.

It was found after removing into their new building, 134-136 Bleury street, about a year ago, that the business increased so rapidly that handling the many details from New York was unsatisfactory, so it was decided to form a Canadian Company under a Dominion charter, which should make the transaction of business in Canada easier to their Canadian customers.

Since the J. L. Mott Iron Works first established in Canada some nine years ago, under the management of W. J. Wall, their business has been a great success. From offices in the Street Rail-

NOTICE TO SUBSCRIBERS.

The Subscription Dept. have recently received a number of complaints from subscribers, stating that their papers are late in arriving. As we are most anxious that our readers should receive their papers promptly, we earnestly request **ALL SUBSCRIBERS CHANGING THEIR ADDRESS** to notify the office promptly. When it is necessary for the Post office to re-address papers considerable time is lost.

way building to a store at 83 Bleury street was the first move, and in a short time these premises were found too small to carry the necessary stock, so a new three story building 42 ft. 6 in x 110 ft. was erected by Mr. Wall to provide necessary facilities for expansion. The building has the main floor devoted to office and show-rooms tiled to a height of six feet, including three model bathrooms gotten up in Mott's best style. The cellar and two upper stories are used for stock, and, although the building has barely been occupied a year, the provision made by the architects for additional floors will soon have to be carried out. "Mott Company, Limited" are very enthusiastic about the future of Canada, and say they have been sur-

prised at the way the demand for high-grade plumbing fixtures is increasing not only for private residences, but also for office buildings, schools and hospitals.

THE CHICAGO EXAMINERS.

The accompanying illustration, reproduced from the Plumbers' Trade Journal, is of the new quarters of the Board of Examiners of Plumbers in Chicago, and the members of the Board. The offices of the board which are finely furnished and equipped with every modern convenience are pleasantly situated on the tenth floor of the new city hall. The strict enforcement of the present plumbing law requiring master plumbers and journeymen to renew their certificates annually together with examinations of new applicants keeps the board constantly on the jump. Shown in the picture reading from left to right are the following: Edw. Anderson, stenographer; Vernon L. Bean, secretary, W. W. Petrie, journeyman plumber member of the board; Dennis McCarthy, official investigator, and Chas. J. Herbert, master plumber, member of the board at his desk on the extreme right.

HANDLE ELECTRIC FIXTURES.

Can plumbers handle electric lighting fixtures with profit? This question is often asked. It has been proven in Guelph, Ont., that the two lines go well together, for the master plumbers have

the electric fixture trade exclusively to themselves. The accompanying illustration shows the showroom of Stevenson



& Malcolm, Guelph, who handle a large electric business and keep four electricians on their staff.



Chicago Board of Examiners.

PLUMBING AND HEATING MARKETS

MONTREAL.

Montreal, Aug. 14.—Business is reported to be very good, particularly in the heating trade. Prices remain steady.

Enamelware.—As the season progresses the demand for enamelware has grown as the new buildings became ready for it. There is still much to expect in this branch of the business. The supply houses report a steady demand.

Boilers and Radiators.—There is a good trade reported with every prospect of a continuance of business at a satisfactory figure. Boilers and radiators are being delivered steadily now and the outlook for fall business is bright. The rapid growth around the city and district has been accountable for the business in this branch.

Lead Pipe.—Trade is active and a big demand is reported. The discount on lead pipe and waste is 30 p.c.; caulking lead is 4½ cents a lb.; the discount on traps and bends is 50 per cent.

Solder.—There is nothing new in regard to solder. The demand continues unabated. Half and half is quoted at 24½ cents and wiping at 22 cents.

Iron Pipe.—Activity in the iron pipe trade is unbroken. Demand continues at a big figure, the city and country combining for the present business. Discounts on fittings are: malleable fittings, 40; cast iron, 60; flanged unions, 65; malleable bushings, 65; nipples, 75 and 10; malleable lipped unions, 65 p.c.

Soil Pipe.—The demand for soil pipe is still heavy. Otherwise there is nothing particular. For medium and heavy pipe the discount is 70 and 10; 7 and 8 in. pipe is 50; light pipe, 60 and 10; fittings are 70 and 10 p.c.

Metals.—Lead is much firmer just now. Domestic lead has gone up 10 cents during the past week and is now \$3.70; imported pig lead is unchanged at \$3.75. Tin is now at 47, a slight reduction from the last quotations. The demand for metals is steady, with the fall giving promise of a good trade. Spelter is quite firm at the time of writing.

TORONTO.

Toronto, Aug. 14.—Reports are to the effect that business is very brisk at the

present time. This is particularly true with reference to the heating trade. All boiler and radiator manufacturers have been rushed to fill the orders which have been pouring in and, in one case at least, the business done during the past two weeks has exceeded the August record for last year by quite a margin.

In the plumbing trade an improvement is noted. Business is not usually very brisk during August but no complaints are voiced with reference to the volume transacted so far this month. There is every evidence of an unusually busy fall.

The feature of the market at the present time is the shortage in some sizes of galvanized pipe. It has been found very hard to get supplies owing largely to the heavy demand.

Enamelware.—The demand is growing satisfactorily, although it has not as yet reached to any marked degree of activity. A good number of advise orders are being placed and there are indications of very active conditions, commencing around September. Prices remain firm.

Boilers and Radiators.—The manufacturers and supply houses are now being rushed to fill the orders coming in. The rush has started earlier than in most years and this fact is accepted as an evidence of a busier year than ever before in the heating trade. One manufacturer states that the sales to-day this month have set a new record for August as far as his firm is concerned. The demand for radiation has been quite in keeping with the business being done in boilers.

Soil Pipe.—All reports indicate that a good volume of business is being transacted. Prices are still a little uncertain but the prevailing discount on medium and heavy is 70 and 10. On the 7 and 8-inch sizes, the discount is still 50 per cent.

Lead Pipe.—There has been an advance in the price of lead pipe, the prevailing discount now being 27½ per cent. Lead waste sells at 9c per lb. and caulking lead at 4½ cents. Traps and bends are quoted at 50 per cent. discount.

Iron Pipe and Fittings.—Great difficulty is reported in getting ½-inch galvanized pipe. One firm report that the

demand has been so large that their stock has become practically depleted and that they are experiencing considerable difficulty in getting new supplies. Two weeks ago they received 5,000 feet on a Thursday morning and had not one foot left on Friday at noon; which shows how heavy the demand has been. Prices are remaining firm. Cast iron fittings are quoted at 65 to 70. Malleable fittings stand at 37½ to 40 per cent. Other quotations are: cast iron bushings, 70; malleable, 67½; nipples, 75 and 10; headers, 60 and 10, although some quote 67½ and 70; flanged unions, 70; malleable-lipped unions, 67½ per cent. (2½ per cent. reduction); galvanized pipe, \$6.18; black pipe, 1-inch size, \$4.54.

Solder.—The price remains high, owing to the continuation of the high price era in tin. While the price of the common grade of wiping is down to 22 cents, the higher grade is still selling at 26 cents. Half-and-half still sells at 27½ cents.

Tin seems determined to monopolize the centre of the stage. After a slight easing off early in the week, the hand of the syndicate was again felt, and the metal is now quoted one cent higher than at this time last week. Practically all the available stocks in London and New York are in the hands of the controlling syndicate, and there are no indications of their being compelled to loosen their hold. In fact, there are rumors of another squeeze in September, and it looks as if consumers would have to expect high prices on tin for some time to come.

There is some possibility of activity in copper, as the present situation is one which is more favorable to producers, than has been seen for some time past. At last consumption is shown to be ahead of production, trading in June and July having resulted in a big decrease of visible supplies.

LOVING CUP OF TIN.

When the tinsmiths' union of Toronto held its annual banquet recently, the president of the organization was presented with this unique loving cup, which represents several of the utensils carried in every tinware shop. The base is formed by a 3-pt. basin, ornamented with a brass nameplate, and this is surmounted by the tapering part of a tin teapot breast. The middle section is fashioned from three stamped teapot spouts, and supports a 2-qt. basin which forms the bowl of the loving cup. The handles on each side are the ordinary handles of tin cups, and the whole forms a very artistic piece of work.

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SOME STYLE

into your Bathroom and select a 62 Bath with Wide Rim, Imperial Waste and Bell Supplies. We carry in stock many other styles equally as good. Lavatories to match. Imperial and National low-down Closets. Full line of supplies.

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Our superior Steam Radiator Valves have very low seats and a high lift of Disc.

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are past the experimental stage.

They set the standard for high quality in material and finish and stand the many tests of use.

Note the seats in Kerr's New Pattern J.D. Radiator Valves which insure perfect drainage.

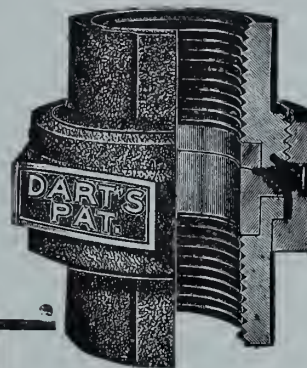
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Plumber and Steamfitter receives, from time to time, enquiries for the names of manufacturers of various lines. These enquiries come from firms who usually intimate they have looked through Plumber and Steamfitter but cannot find any firm advertising the line in question. In many cases these firms are anxious to secure the information at once. This page enables manufacturers to keep constantly before the trade lines which it would not pay to advertise in larger space.

EMERY WHEELS.

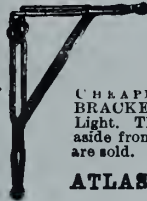


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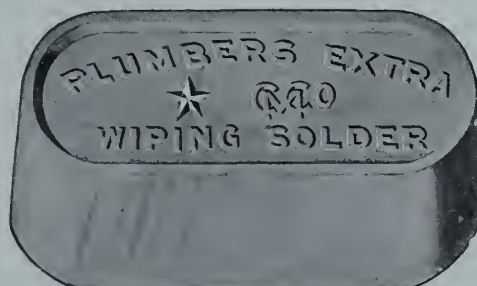
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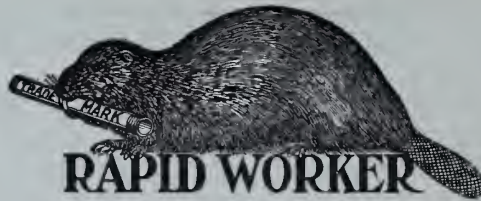
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EXTRA STAR WIPING
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One man with a Beaver Die Stock is worth two or three men with any other Die Stock made.

"Beaver" Adjustable Die Stocks

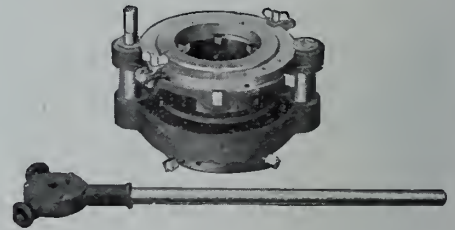
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No. 25A, threading 1, 1¼, 1½, 2-inch pipe,
A boy can operate it,



No. 6, threading ¼, ½, ¾ inch, complet



No. 60. Uses two sets of dies. One set cuts 2½, 3, 3½ in. the other cuts 4, 4½, 5, 6 in.; they are inserted without removing any parts.

No loose Bushings or loose Dies on No 25A and No 6, and they cut 1, 1¼, 1½ and 2-inch pipes.
We can furnish a separate set of dies for 1, 1¼, 1½ and 2-inch pipe

Write us for Illustrated Price Lists.

BORDEN CANADIAN COMPANY,
66 Richmond Street East Toronto, Ontario

The "ADANAC"

is the Newest and Best Bath Cock on the Market—the Genuine Quick Opener Lever handles but NO Fuller Balls.

**"Patent Pending
Design Registered"**

The following points are the same as contained in OUR Quick Opening Sink Cocks.



1. FIBER WASHERS ENCASED.
2. STEMS DOUBLE PITCH THREAD.
3. RAISED SEAT (same as Compression Bibbs.)
4. SPECIAL PACKINGS (same as Compression Bibbs.)

OUR GUARANTEE

"Any article of our make, proving defective through inferior metal or improper workmanship, on our part, will be cheerfully replaced with two good ones at no charge to you."

CANADIAN BRASS CO., Limited
GALT - CANADA



YOU CAN SAVE MONEY BY DEALING WITH US

Our stock of Plumbers' Supplies is one of the largest in the Dominion, and embraces all the most reliable lines, from a washer to the complete modern bathroom outfit. When you order

"Scotia" Plumbing Supplies

you get the right goods quick. You save money] by getting the

Lowest Prices

consistent with good quality and by avoiding delayed or wrong shipments.

Test us with a trial order for anything in plumbers' supplies.

WM. STAIRS, SON & MORROW, Ltd.
HALIFAX ESTABLISHED A.D. 1810 NOVA SCOTIA

Brings Prestige and Satisfaction



The "SOVEREIGN" RADIATOR

Opportunity has been knocking at your door time and time again—the rarest opportunity in the plumbing business.

Until you avail yourself you will never completely realize the true value of the SOVEREIGN RADIATOR.

Our Radiators are very artistic and are made of the best grade material. They always bring the finest results, because every valve, every casting and every joint are absolutely efficient and reliable.

Gain your customers' confidence by installing the best—the unconditionally guaranteed.

WRITE FOR CATALOG AND PARTICULARS

Taylor-Forbes Co., Limited, Guelph, Ont.

TORONTO: 1088 King St. W. Taylor-Forbes Co., Ltd., 246 Craig St. W., Montreal, Que. Taylor-Forbes Co., Ltd., 1070 Homer St., Vancouver, B.C. W. R. Mathers, 46 Princess St., St. John, N.B. H. R. Moulden & Son, Travellers' Bldg., Winnipeg, Man. The Mechanics Supply Company, Quebec, Que.





ASTORIA

AVOID COMPLAINTS THEY EAT UP YOUR PROFITS

It is annoying after you have finished a job, to have your telephone wire kept hot with the complaints of a dissatisfied customer. This can be prevented by using reliable fittings and supplies on every job. The Morrison Line of Plumbing Supplies are thoroughly reliable. We guarantee every article we sell to be exactly as represented.

In W.C. outfits you will find these lines to be thoroughly satisfactory.

"QUALITY"
Closet Combinations
"Elgin" Washdown
"Simplex" Syphon Jet
"Astoria" Square Back Syphon Jet

All our low-down outfits are furnished with our Patent Combined Ball Cock with Shut-off Cock. This is the simplest and most efficient on the market, with full weight copper lining.

THE
James Morrison Brass Mfg. Co.
LIMITED
Toronto Ontario

THE PLUMBER IS JUDGED BY HIS MATERIALS



"EMPIRE" **CLOSETS**

are the choice of plumbers who know, and to recommend them is to advertise your own standing in the trade.

The seat is of special construction, the tank large and the bowl well made and of good shape.

Full range of Plumbers' Supplies. Immediate shipments guaranteed.

EMPIRE MANUFACTURING CO., LTD.
LONDON, ONT.

PLUMBER & STEAMFITTER

and Sanitary Engineer of Canada

THE MACLEAN PUBLISHING COMPANY, LIMITED, PUBLISHERS

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TORONTO, 143-149 University Ave

WINNIPEG, 34 Royal Bank Building
NEW YORK, 115 Broadway

Vol. V.

Publication Office : TORONTO, SEPT. 1, 1911.

No. 17



THE STANDARD

COMPANY LIMITED

GENERAL OFFICES AND FACTORIES · PORT HOPE · CANADA



PLATE F. 465

THE STANDARD Wash Sinks are the most perfect, durable and satisfactory for the plumber to install, because they are thoroughly adjusted and fitted before leaving our works.

Their quality is unsurpassed and a permanent advertisement for the plumber who installs them.

Roughing Measurements sent on request.

BRANCH OFFICES AND SHOWROOMS

TORONTO 119 KING STREET EAST	MONTREAL 44 BEAVER HALL HILL	WINNIPEG 76 82 LOMBARD ST
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PLUMBER AND STEAMFITTER

Beaver Brand

Cast Iron Enameled Ware

Unsurpassed for Pure Whiteness of Color,
Attractiveness of Design, Finish and Durability.

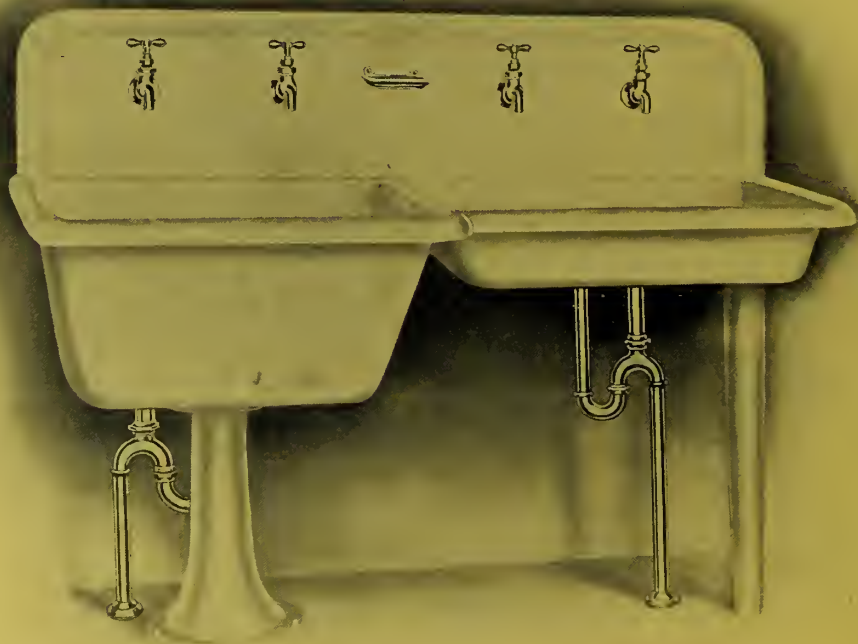


PLATE "D" 357

The above cut shows one of our latest patterns of Roll Rim Combination Laundry Tubs and Sink, with one-piece recessed back, for either left or right hand side.

This new fixture is one of our complete lines of Sinks, Baths, Lavatories, Laundry Tubs, Range Closets, etc., to which we are continually adding new patterns.

See our exhibit at the Toronto Exposition, where we will be pleased to show our lines to one and all.

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Monarch Brass Mfg. Co.,
178 Victoria St., Toronto

MANITOBA and NORTHWEST:
E. B. Plewes,
120 Lombard St., Winnipeg

BRITISH COLUMBIA:
A. O. Campbell,
550 Beatty St., Vancouver

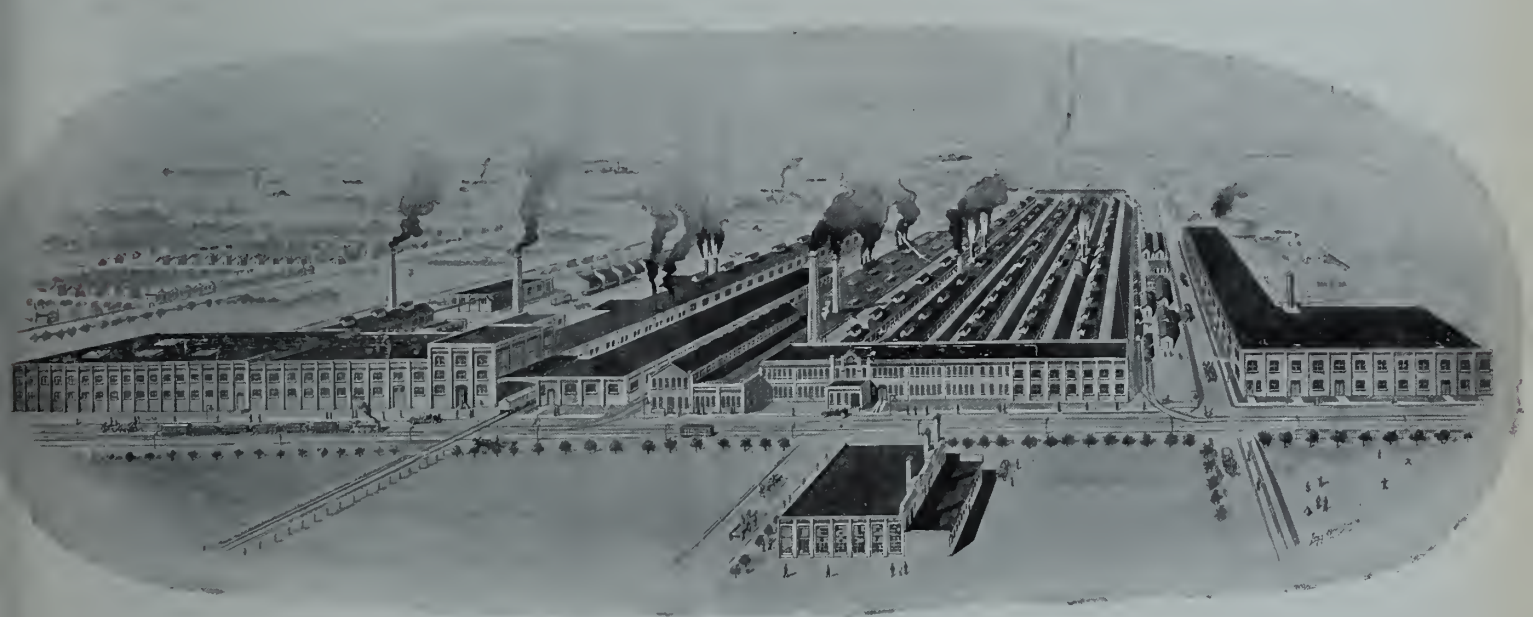
The Honeywell System of Hot Water Heating

is specified by leading architects; installed by most progressive steamfitters and insisted on by discriminating builders and proprietors. This condition is the logical tribute paid to a thoroughly efficient, well reasoned system.

The Honeywell Heating Specialty Company
WABASH, IND.

Frank T. Rawley,
Canadian Manager

Room 1008 Eastern Townships Bank Bldg., Montreal.
Phone Main 4615



Malleable and Cast-iron-pipe Fittings

MANUFACTURED BY

FITTINGS LIMITED

OSHAWA

WINNIPEG

MONTREAL

Our 1911 Catalogue is now ready.

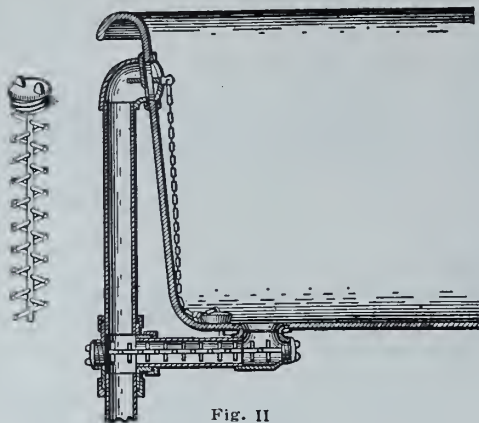


Fig. II

E.N.O. Patent Bath and Waste Overflow

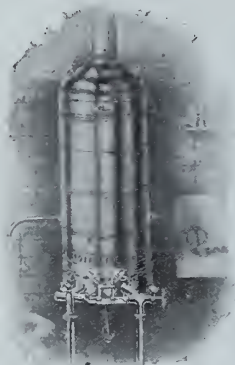
SOMETHING NEW

Here is a Bath Waste and Overflow that can be thoroughly cleaned out from two outlets, viz: back of Bath or underneath. The Cleanout Rod, Fig. I, is made of aluminum, has a ball joint connection to the plug. All the fittings are of cast brass and heavily nickel plated. The whole is got up for use and will stand more abuse than any other Bath Waste in existence. Our patent can be used with any standard bath on the market.

SOLE CANADIAN MANUFACTURERS

Westport Mfg. & Plating Co., Limited

117½ BANK STREET, OTTAWA



Vent or Non-Vent.

The "Rapid" Instantaneous Bath Heater

is bound to please you and your customers; not a weak point in it. Absolutely guaranteed. Not necessary to use a vent pipe. All gas valves adjustable to local gas pressures, insuring perfect combustion. We claim the "Rapid" will heat more water with less gas consumption than any other instantaneous heater on the market. Make us prove it by sending us or giving your jobber a sample order.

RAPID HEATER COMPANY
(INCORPORATED)
GRAND RAPIDS, MICH., U.S.A.

Cochran Pipe Wrenches

STRONGEST AND MOST DURABLE MADE

WARRANTED TO GIVE

50% more service
than any other
pipe wrench
on the
market.



Positive Grip
and Quick Release,
Thoroughly Tested
and Guaranteed.

A 10 Day Trial will Convince.

IT BREAKS ALL RECORDS AND
SCORNS ALL COMPARISON!

Canadian Branch:

70 George Street - - OTTAWA



Just a twist of the wrist

With a CLEVELAND AUTOMATIC RATCHET and you can bore a neat, clean hole through any joist. And do it in so much less time required by the ordinary ratchet that it will surprise you.

Order a CLEVELAND AUTOMATIC RATCHET and try it on the very next job you have.

It will pay for itself on that one job in the time saved.

And the first cost is the total expenditure, as owing to its simple construction, and the quality of material used, it cannot break or get out of order.

Write to-day for prices and further information

The McDonald Brothers Co.
CLEVELAND, - - OHIO

"Try it Before You Buy it"

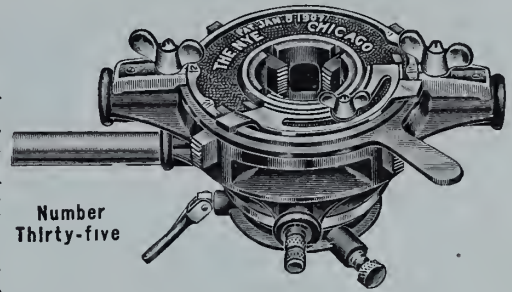
That is the slogan that has introduced and popularized in every corner of this broad country thousands upon thousands of NYE TOOLS. If I did not know that every tool turned out in my plant possesses points of utility, strength and design that recommend them above other makes to the progressive plumber I would not dare to make my **FREE Trial Offer**.

Take for instance the **NYE No. 35 ADJUSTABLE DIE STOCK**

This tool threads pipe sizes from 1 to 2 inches inclusive, and will do better and cleaner work than any similar tool on the market. It can be easily adjusted to cut over or under size. It also will cut a running or crooked thread if desired.

The ratchet construction on this stock is perfect in every detail, and is a tool that gives delight to any discriminating mechanic.

The price of this tool complete is \$15.00 net, and will be sent on free trial to any reputable dealer in the United States or Canada.



This tool, equipped with one set of chasers, threading from 1 to 2 inches inclusive . . . \$15.00 net
Extra chasers only, threading 1 to 2 inches inclusive. Per set . . . \$4.00 net

NYE,
THE DIE MAN

The Nye Tool and Machine Works,

124 N. Jefferson St.,
CHICAGO, ILL.

TWO CENTS PER WORD

You can talk across the continent for two cents per word with a Want Ad. in this paper.

Those Who Wish to Rent or Hire

stores or departments, sell or buy businesses or stocks, place or acquire accounts, obtain competent help, connect with satisfactory positions or secure aid in starting new enterprises, should not fail to use the Want advertisement Page of **THIS PAPER**.

WROUGHT PIPE

BLACK and GALVANIZED. SIZES, 1/8 IN. TO 4 IN.

All our pipe thoroughly inspected, tested to 600 lbs. hydraulic pressure and branded.

Ask your jobber for



Brand

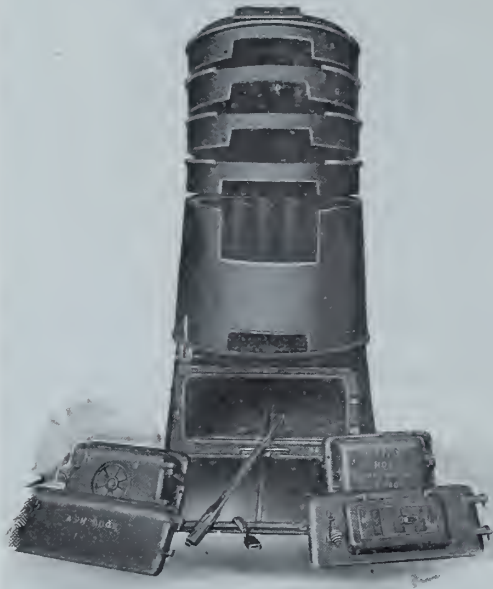
CANADIAN TUBE & IRON CO., LIMITED

Montreal

Works: Lachine Canal

"KING"

BOILERS and RADIATORS



Easier to Sell
Easier to Mount
Easier and Cheaper
to Operate



You Can't Afford to Install Old-Fashioned Goods

NOT only is Life too short, but what is more to the point, competition is much too strenuous.

To get the most out of your high-priced journeymen, your modern and expensive shop equipment, and the investment of your own time, money and experience, you can't afford to handicap this organization by putting up with out-of-date goods and unprogressive business methods.

Your profits and your success depend upon your reputation as a heating contractor, and this, in turn, depends upon the number of high-class, more-than "satisfactory" jobs to your credit.

Why not let "**KING**" **Boilers and Radiators** help you turn out more work, better work and at a better profit?

You know that these goods fairly bristle with points of superiority— useful advantages that your customers are looking for, and you know that we're making these features public.

We'd like to get together with you on this season's work and show you some of our practical plans for helping you. Our success as manufacturers of "King" goods, you know, depends upon your success as a retailer of them.

Don't take your opinions on the new "King" second-hand. Try one on your next job and find out for yourself its value as a trade-puller.

STEEL AND RADIATION LIMITED

TORONTO—Head Office: Fraser Avenue.
Showrooms: 78-80 Adelaide St. E.

MONTREAL — 138 Craig St. W.

Plumber and Steamfitter

and Sanitary Engineer of Canada

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Circulating amongst Plumbers,
Steam, Hot Water and Gas Fit-
ters, Sanitary Inspectors, Heating and
Ventilating Engineers, City Engineers,
Boards of Health, Architects, etc.

TORONTO, SEPTEMBER 1, 1911

"I HAVE stuck to straight plumbing and heating and never branched on to anything else," once declared a veteran of the trade, "and I have made money. I don't believe in taking up all these new-fangled ideas." There

DO SIDE LINES PAY THE PLUMBER?

spoke the typical stand-patter, the disciple of the old principle of let-well-enough-alone. It is not intended to assert that he had not made a success of his business. On the contrary, he had done exceptionally well and had enough laid away to insure a pretty comfortable old age. But because he had made money by doing one thing, does not prove that it could not have been made in any other way. Instead of making his money, because of his strict tabooing of "side lines," it is quite possible that he had made it in spite of his attitude on that question.

In this issue, Plumber and Steamfitter presents something of the story of the Geo. E. B. Grinyer Co., Guelph. The firm dates back a few years only and yet it has experienced a growth of wonderful dimensions, considering the shortness of the time. And this growth has been largely due to the energetic way in which they have seized opportunities to handle new lines and exploit new goods. With the advent of Niagara power, they started an electrical department and that branch of their business has since seen a most rapid expansion. They stock all such lines as water heaters, motor pumps, bathroom accessories and electrical novelties. And, what is more to the point, they sell them. Everything which they feel can be legitimately and profitably handled, they take up fearlessly and the results have been a vindication of their judgment in every case.

This is an age of rapid progress. New ideas and mechanical innovations are continually being brought forward. Every trade must keep abreast of the times and the sanitary trade more than others, for the reason that improvements are being more rapidly effected in the science of sanitation. It is wise, therefore, for members to break away from the restricted limits set in bygone days.

SECRETARY WATSON voices the opinion that it is not necessary to appoint a salaried assistant to himself at this juncture. The reason he gives is that the work in the secretarial department does not warrant such an appointment yet. Mr. Watson thinks

SHOULD MATTER BE DELAYED?

that, for the present, he can handle what work is to be done and that around the first of the year, when preparations for the next convention will be started, a

salaried man can be secured. No one doubts the willingness and the ability of the worthy secretary to do the work. The association has no better worker in its ranks nor one better versed in all that pertains to the office. We thoroughly agree with Mr. Watson that he can handle, and is handling the work now arising, with a great deal of credit. At the same time, we believe that the idea in appointing a salaried officer is to make it possible to very considerably widen the scope of the office. With an assistant, devoting his whole time to the work, the secretary would be able to plan wide organization campaigns and keep more closely in touch with the trade than he can now do, no matter how earnestly he may try.

If a salaried man would be useful after the first of the year, he would be useful now. It would just mean that the campaign planned to start then would begin just that much sooner. With the work of revising the constitution on his hands, Secretary Watson would, we believe, find an assistant a valuable asset.

THIS IS an age of specialists and we naturally find that there are, in practically all lines, experts whose opinions it is necessary to secure when occasion arises. Expert opinion of this sort comes high. The specialist

CHARGING FOR EXPERT ADVICE.

in medicine will take up a case or lend his services in consultation only where there is a fat fee in sight. The lawyer's advice is dearly bought. The consulting engineer, who is called in to give advice on some problem which he has mastered by concentration on that one phase of his work, is paid at a rate which shows how highly prized is specialized knowledge.

But what of the sanitary engineer? He is a specialist in his line, having studied the more or less intricate problems of household sanitation and heating. He has mastered his work by dint of practical experience and steady application. Surely the knowledge and insight thus obtained is worth something. Yet the sanitary engineer, although he is most frequently consulted, does not secure, in fact does not seem to expect, any remuneration other than is involved in the carrying out of his work. For instance, when a man decides to put in a new heating system or sanitary appliances, he promptly seeks out a plumber and talks the matter over with him. The plumber gives him the benefit of his experience and advises him as to the course he should take. The householder uses the knowledge thus obtained in mapping out his plans and then, in nine cases out of ten, gets figures from half a dozen firms. The consequence is that the

man, whose advice was sought in the first instance, very frequently gets left and receives no compensation whatever.

This is not fair to the trade. The sanitary engineer has won his knowledge by hard and persevering effort. Why should he part with it gratis? Why should not people pay when they seek information on matters pertaining to heating and sanitation, as well as when they consult the specialists on health and the law? If some such provision existed there would be less hawking of work around to a dozen or more firms and less trickery practiced to secure the lowest possible quotations.

INTEREST is being shown in the question of the standardization of ordinances. A letter has reached the editor from the maritime provinces in which some rather pointed remarks are made on the situation. "We need a

UNIFORM CODE IS REQUIRED.

uniform code," declares our correspondent, "more than anything that I know of. Yes, we need organization in the trade, but to my mind the change of name is less important than the necessity of getting legislation to put all ordinances on one level, common sense basis."

The question has been taken up in the United States with some success. Uniform codes are being adopted in a number of the states and the leaders of the movement have not despaired of the adoption of a national basis. The time is ripe for a movement of a similar nature in this country. A uniform code would be a benefit to the trade in innumerable ways and would lay the foundation for a general improvement of conditions.

ONE OF the most valuable features of "Plumber and Steamfitter" is the department known as the "Question Box." Devoted to it is to the discussion of practical topics and the knotty points, which arise in every

GROWTH OF QUESTION BOX.

day work, it has a peculiar interest for every reader. It has been gratifying to note the increase of interest that has been manifested of late months. Not only are more problems sent in but the answers given have brought letters of comment and approval, sometimes of criticism. Such communications are welcomed, as the idea of the department is to open up discussions on trade topics as well as to provide a source of ready information.

Write us and give us opinions or tell us your troubles. If we cannot help you, perhaps some brother member of the trade will be able to do so.

HISTORY MOVES in circles. A further evidence of this old truism is found in the tendency now shown in commercial circles to hark back to the old system of traveling. The "bagman" of half a century ago made

SALESMEN IN MOTOR CARS?

his rounds in his own "shay," with his bags strapped on the back. That was before the railroads made it possible for the traveling salesman to reach every corner of his territory with a minimum of discomfort.

With the introduction of the automobile, a tendency is now noted to put salesmen on the road equipped with machines of their own, thus freeing them from the restrictions and limitations of time-tables, and enabling

them to cover the ground just as their own tastes and expediency suggest. A wholesale hardware house in the Maritime Provinces has been conducting an experiment along this line. Two representatives have just returned from a three-weeks' trip through New Brunswick and Quebec. Their car covered more than 1,600 miles, without, so they have reported, "the necessity of an adjustment or the loss of a moment on the road." It is, therefore, quite possible that this firm will secure a number of machines for their traveling salesmen and have a certain amount of the territory covered in this way.

The suggested change contains possibilities both good and bad. If it were possible to secure a machine which would plough through any weather and over any roads, despite the handling of inexperienced men, the plan would be well nigh perfect. But as it is, the danger of break-downs and delays fully equals the losses of time suffered through the time-table limitations.

THE COMPLAINT is constantly voiced that it is becoming more difficult all the time to secure efficient help. While the standard of workmanship is probably as high as it ever was, the work is more intricate and varied, and there is, consequently, more need for skill and knowledge of the trade now than ever before.

Our Australian contemporary—Plumbing and Lighting—in dealing with this problem, has the following to say:

As each year rolls by, the jobbing business of this country becomes more difficult to run on economic lines. The reason is apparent. We have not sufficient population to keep our men employed as specialists in any particular branch.

Years ago the plumbers' work consisted chiefly of roof work, gasfitting and water supply. Then followed a long period in which hot water supply made the only variation. But, nevertheless, an indentured apprenticeship of from five to seven years was considered necessary for one to properly learn the trade.

During the last twenty years many new lines have sprung into existence—electric bells, sewerage connections, septic tanks, hot water radiators, hot air warming, ventilators and others.

And we have had practically no apprenticeship!

Small wonder that the craft has become flooded with unfortunate workmen, unable to give satisfaction.

The apprenticeship problem is well worth the attention of every master. Only by giving the apprentices a good chance to learn all branches of the trade can the problem of efficient help be solved.

UNIFORMITY IN laws is a first necessity. Consider the confusion which results from the wide divergence in the marriage laws of the states in the American Union; a man can be married in one, single in another and perhaps a bigamist in a third. The divergence in plumbing ordinances leads to unavoidable and serious confusion in the trade. It is time that all this was eliminated.

THE HUM of the binder in the West is a merry sound to the ear of the western plumber. It spells prosperity and activity.

Canadian Society of Sanitary and Heating Engineers

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HEATING AND VENTILATION
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Does Not Favor Appointment at Present

Secretary John Watson Thinks That Work is Not Yet Heavy Enough to Warrant Securing a Paid Assistant — Revision of Constitution Now to the Fore.

SECRETARY Watson, of the C.S. of S. and H.E., writes as follows to the editor of Plumber and Steamfitter:

"I believe it is my duty to make some explanation in reference to the non-appointment of the paid secretary.

"This question has been taken up nearly every time that President Walsh and myself have met, and my version is this, I have not been over-worked as secretary of the C.S. of S. and H.E. as yet, although I think my letters have reached every city or town in Canada where our society is in existence.

"I have requested all the officers and chairmen of committees to give the secretary's office work, and the moment that the work gets burdensome to me, we will have the paid secretary appointed. We will have our man in view so that there will not be any loss of time in getting him to work.

"I feel that this is our year for organization, and we are not in shape yet for a paid secretary. I can do all the work of the secretary's office in a few hours each week, so far. I am under the impression that the great rush of work has already been done for the present, but expect quite a rush of work about the 1st March and will then be kept busy until the time of the next convention in Calgary.

"We must not forget that we have not the proper material to work with from this office. For instance we have practically got no constitution or by-laws, no cards, no certificates, no anything to send out to induce locals or provincials to apply for membership. In fact the locals and provincials have already gone ahead of the main body.

"If we are to be the Canadian Society of Sanitary and Heating Engineers of Canada, we must have the provincial societies apply to us for charters and all local societies outside of the provincial

should do the same and all be under our control.

"The constitution, that the present executive are working on, will cover the ground, but this cannot be adopted until our next convention or we will have to call a special meeting of the society when the work is ready for adoption.

"We expect to have the new constitution in shape and well thrashed out by the whole membership before the next meeting, and also a draft of the charter and other documents, and hope to have applications from each local and provincial for those charters and then we will be on a proper footing.

"Do not give the members the idea that it is shortage in cash that is the cause of this appointment not being made, for I have faith enough in the master plumbers to know that if ten thousand dollars were required for any good cause the money could be had in very short order.

"The whole matter is, I do not consider the work burdensome at present, and the assistant will be appointed when the proper time comes.

"I wish you to publish this in Plumber and Steamfitter so all our members will know the cause of the delay in making this appointment, and if there are any of the members still of the opinion that the assistant secretary should be appointed, let him get to work and boom the society.

"This will increase the business on this end and maybe we will require an office staff to take care of the work. This is what we are all looking forward to.

"Thanking you again for the great help that your Plumber and Steamfitter has given me and the benefit it is to the whole society.

Yours very truly,
JOHN WATSON,

Gossip of the Trade

The Winnipeg Plumbers' Union elected John Wooding as their delegate to the Trades Congress at Calgary, Sept. 11.

F. Smith has been awarded the contract for the plumbing in the extension of the Winter Fair building at Guelph. Howard Bros. will do the tinsmithing.

Point Grey By-law.

A by-law has been put through by the council of Point Grey, B.C., to regulate all plumbing work done in the municipality.

Gas Fitting Firms.

S. A. Gamham and Walter Gamble, Tillsonburg, have entered into partnership for the carrying on of a gasfitting business, and have opened a shop there. Mr. Gamble is a recent arrival from Selkirk. Pow and Wilcox have also established a gasfitting department and have secured G. Spittal to take charge of it.

Offering a Prize.

Borton, The Plumber, Summerland, B. C., has offered a prize for the Fall show at that place. Ten dollars will be given for the best loaf of bread cooked in a Gurney Oxford stove, for which line M. Borton is agent. He is making a strong bid for the stove business this fall and is advertising special bargains in box, camp and cook stoves.

Good Advertising Talk.

Stevenson & Malcolm, Guelph, are advancing a convincing argument in their advertising matter. Their ad. reads:

If you are plumb tired of plumbing that doesn't work or last, try our kind. We'll give you a job that will prove satisfactory or we won't charge you a cent for it. Better have us overhaul your plumbing now before winter shows up its defects in ways you won't like. A little good plumbing now may save you lots of trouble and expense later on.

The Rapid Growth of a Well-Conducted Business

Geo. E. B. Grinyer & Co., Guelph, Have Inaugurated Original Ideas in the Conduct of Their Business and in Arrangement of Their Premises—A Large Electrical Department is Carried—Specialties and New Goods are Featured.

ONE does not have to seek far for reasons why success has attended the efforts of Geo. E. B. Grinyer & Co., Guelph. Managed by three young men, all three full of energy and ambition, the business has grown by leaps and bounds. By close attention to the details of business and the exercise of considerable foresight, they have guided the business along progressive lines and have introduced methods which compel admiration.

The showrooms and workshop of the Grinyer Co., situated on Carden Street, Guelph, are well worth a visit. So many novel ideas have been put into effect that there is something to attract interest on every hand. Full use has been made of every facility for display, and the building, from cellar to roof, has little surprises in the shape of ingenious devices wherever you look. Every foot of space is utilized in some way.

The accompanying illustration shows the building from the outside, with the staff grouped around the door. It gives a fairly accurate conception of the results attained by Mr. Grinyer and his associates in their efforts to make an effective display of their stock. The plumbing showroom is on the ground floor, and, as it can be seen from the street through the glass casework, which constitutes the front of the building, it serves the double purpose of showroom and window display. Here are installed a line of first-class plumbing fixtures, bathroom supplies, heaters, motor pumps, electrical accessories and lighting fixtures. Originally the space thus utilized served as a verandah running one storey high. It was decided that the space above was too valuable to lose and quite recently it was built in with a glass front, thus making a second combination showroom and window display.

As will be seen from the picture, this space is used for the display of stoves, a well-assorted line of heating goods being carried.

Lighted Up at Night.

The full value of this very original arrangement can be judged only at night-time. Geo. E. B. Grinyer & Co. believe in "lighting up," and they have both of their front showrooms illuminated at night, in addition to the large electrical sign above the shop, which is operated by alternating current. When full power is turned on, the establishment presents a very striking appearance.

Along the glass front of the stove showroom wires are strung with small lights of fantastic shapes and varying colors at intervals. Some of the lights are designed to represent birds, flowers and clusters of grapes. This is also lighted up frequently at night.



The store of Geo. E. B. Grinyer & Co., showing the plumbing showroom (below) and the stove showroom (above). This arrangement is an original and effective one.



The members of the firm. Reading from left to right: J. H. Doughty (who joined the firm recently), Herbert E. Bates and Geo. E. B. Grinyer.

An Electrical Department.

Something over a year ago, Mr. Grinyer concluded that the time was ripe for the establishment of an electrical department in connection with his business. Guelph had declared for hydro-electric power and there was every prospect of a large trade in electrical supplies, as soon as the system was inaugurated. He was fortunate enough to meet at this juncture, a young man named Herbert E. Bates, who was in the city on a visit to his father, a clergyman in the Royal City. Mr. Bates was an electrician of extensive experience, and, as he was not adverse to remaining in the city, a partnership was formed. Mr. Bates has since had charge of the electrical department and has built up a most astonishingly large connection, considering the short time that has elapsed since the start was made. They now employ seven electricians and carry a stock of supplies and fixtures of such size that the whole of one floor of the building is not sufficient to hold it. Many of the largest electrical supply stores could not show the equal, either in point of size or in the variety of stock carried.

Mr. Bates has arranged his stock in an ingenious manner. Each fixture is connected up so that it is possible to turn on the light if desired, and thus show the piece to customers to the best possible advantage. Every fixture in the display rooms is connected up in this way.

The department has been a huge success in every sense of the word. Its growth has been so rapid that comparatively few people in Guelph realize just how extensive and high-class a stock is carried. They are coming to realize it

gradually, however, and in the meantime the business done is sufficient to keep the department running in full working order.

New Lines Featured.

One of the outstanding features in connection with this business is the success that has been made of selling new lines. Mr. Grinyer personally conveyed the writer through the establishment and pointed out the methods adopted in a number of cases. A motor pump is stationed in the plumbing showroom, connected up and ready for business. He demonstrated the working of this

machine, and then stated: "We have sold several of these already just through having one here in readiness for a demonstration. The sales have been made to customers who dropped in for something else and were impressed with the splendid possibilities of a machine of this kind."

Close at hand was an instantaneous water heater. It also was connected up and ready for service, a fact which accounted for the sale of five of them within a comparatively short time. In one corner several vacuum cleaners were seen. None had been sold, but, as they had been in stock only since the previous day, this was not surprising. The writer has no doubt that, by this time quite a neat little business is being done in vacuum cleaners.

Electric fans were shown in all parts of the room, quite a number of them being connected up. "We did quite a business in fans during the hot spell this year," Mr. Grinyer explained. "We had some out in full sight in operation, and they looked so cooling that people came in and bought them for their offices and homes. Fans are a good line to carry."

There were other electrical articles in the showroom—medical batteries, dry cells, electric toasters, flashlights and electric stoves. All had proven to be good selling lines, and the demand was probably just in its infancy.

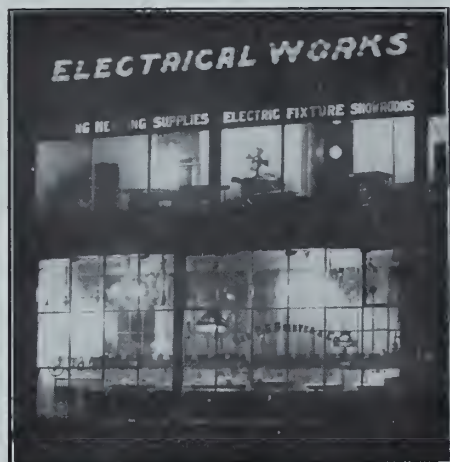
Carried Accessories.

The firm also carry a complete line of bathroom fixtures—towel racks, tooth-



One of the show rooms used for the display of electric fixtures. A number of other rooms are used for the same purpose.

brush holders, seats, mats, etc. They do not find any difficulty in making sales and have found that the profit is amply



Using electric power as an advertisement. How the store of Geo. E. B. Grinyer & Co. looks at night.

sufficient to warrant carrying a complete assortment.

Keeping Track of Business.

The methods adopted by the firm in looking after their business are quite in keeping with the enterprise shown in regard to salesmanship. Each department is handled on a business-like basis, and particular care is taken in checking up stock and time.

Every day the employes are handed stock and time sheets, which they must fill out. One half of the sheet is used

GEO. E. B. GRINYER & CO.
PLUMBERS, ELECTRICIANS, and FITTERS

TIME AND STOCK SHEET

Workman's Name	Date
Journeymen - TIME - Helper	STOCK USED and WHO FOR
7	
8	
9	
10	
11	
12	
1	
2	
3	
4	
5	
6	

OVERTIME:

The time and stock sheet used.

for the entering of the workman's time, the space being divided up to allow space for each hour. The other half is

used for the entering up of all material taken out.

By closely checking up all sheets it is possible to account for labor and material on every job done, and nothing is

lost in that way. A copy of the time and stock sheet is reproduced.

Close attention is paid to collections, the accounts being sent out regularly every month.

A New System of Sewage Disposal Adopted

Lethbridge, August 17.—What is the most perfect system of sewage disposal possible? That is a question which has for years baffled the great sanitary engineers of the world, and is still very far from solution.

But out at the provincial penitentiary near Lethbridge, there is now in operation a system, unique in the fact that it is the only one of its kind in the world, which will undoubtedly prove of material assistance in solving ultimately the question of sewage disposal, and which has already done much in that direction.

This system may be termed the "Owens" system, designed by Provincial Sanitary Engineer Owens, along the lines of the Murray system, adopted by

Lethbridge, but supposed to be an improvement on that system.

Mr. Owens has installed the system, at both the provincial jail and the provincial asylum, and when Provincial Health Officer Irving saw them the other day, they were in perfect order.

The system is one which brings into play all the elements of the earth and air to destroy the sewage. The sewage is turned directly into live earth beds divided into three compartments, and the bottoms of which are laid with flat stone plates, slightly raised from the earth. The sewage is treated in turn in all three compartments until almost absolutely disposed of.

Mr. Owens is at present only experimenting with the system, but hopes to make it a success, as he has given years of study to the matter.

New Buildings, Water and Sewerage Systems.

Municipal Undertakings.

Plans are to be prepared for a sewage disposal plant at Hamilton, Ont.

A plan for a water system has been adopted at Barnet, B.C., to cost \$15,000.

The ratepayers of Biggar, Sask., will vote on a by-law to raise \$22,000 for waterworks.

On Aug. 28, the ratepayers of Haileybury, Ont., will pass on a by-law to raise \$15,000 for waterworks.

The ratepayers of Port Hope carried the by-law for waterworks extensions. Debentures to the extent of \$15,000 will be issued.

Public Buildings.

A town hall is to be built at Flinton, Ont.

A new building is to be erected by the School of Mining at Kingston.

Tenders are being called for the new \$100,000 Y.M.C.A. building at Brantford, Ont.

An addition is to be built to the Collegiate Institute building at Clinton, Ont.

A new theatre is to be built at Edmonton, Alta. Outside of the equipment, it will cost \$35,000.

A new \$35,000 school is contemplated at Strathroy, Ont.

A new public building is to be constructed at Weyburn, Sask.

The Presbyterian Ladies College at Red Deer, Alta., will cost \$75,000.

The Edmonds Club, New Westminster, may build a \$10,000 club house.

Tenders are to be called for a new \$60,000 post office at Masonneuve, Que.

The new Cloverdale school to be built at New Westminster will cost \$17,000.

St. Andrew's Presbyterian Congregation, North Vancouver, are building a new church to cost in the neighborhood of \$18,000.

General Building.

The Coulther-Waugh Fur Co., Montreal, are to build a \$40,000 warehouse at Calgary.

A. M. Rockwell & Co., Chilliwack, B.C., are contemplating the erection of a storage warehouse.

The Western Canada Flour Mills Co., head office, St. Boniface, are doubling their plant at Rainy River, Ont.

Alex. Bruce & Co., Glasgow, Scotland, have arranged for the building of a large timber curing plant at Fort Frances, to cost about \$250,000.



POINTS ON HEATING

By CHAS. H. DENISON



CHAPTER 13.

SOME THOUGHTS ON VACUUM HEATING.

A vacuum is sometimes considered as unoccupied space. I believe that it is granted that no one, as yet, has succeeded in obtaining what could be considered a complete vacuum. Enough space has been relieved (so to speak) or mechanical means employed automatically or by using some cheap force, so that the vacuum can be used in connection with steam heating to great advantage. The reason that more vacuum jobs are not used is because the people do not thoroughly understand just how these jobs operate and also because many a heating contractor is afraid to attempt the installation of said job, preferring the old style of steam heating as put in for the past 25 or 30 years.

Take a regular steam, gravity return job and install it as best you can. Every time you heat the job up, there is a certain amount of air in the system that **must be pushed out before all the radiation will heat.** This necessitates a certain amount of pressure at the boiler. The job could probably be cleared of air with, perhaps, a quarter of a pound pressure, or less. However, no one wants to wait around in the morning and to economize for the sake of saving a few pounds of coal, and so the fire is pushed, with the result that anywhere from two to ten pounds of steam are generated and the air driven from the radiators in about half an hour or a trifle less. That is in the ordinary low pressure gravity job of which I am speaking. Now this consumes about one small hod of coal on an average, say 20 pounds, and, on one such firing per day, would amount to between one and two tons of coal per season. It would be estimating mildly to say that the average householder throws away at least \$15.00 a year driving the air out of the radiators.

If some way can be devised, whereby the air does not have to be pushed from the radiators every time that it is desired to get them hot it stands to reason that such a working job will be easier to operate, quicker in action and cheap-

er to run, even though the first cost might be somewhat greater than a plain gravity steam job.

Any good reliable vacuum job or system, rather, put in by a man that understands his business and one who will exercise as much pains with the installation as **he would be compelled to do if he put in a gas job in any community that had a gas inspector,** will operate much easier than the gravity steam job. From the very nature of things it simply has to for there is nothing else for it to do. The removal of a part of the air in the steam mains, radiators, etc., makes it just so much easier for the steam to get around. It is not always steam, either, for it is well known that the water in the boiler at 180 degrees sends forth a hot vapor, which, if it can be conducted to any portion of the radiation, will give out a certain amount of heat.

Another point in favor of the vacuum work is that the water will boil easier if the pressure of the atmosphere is removed. Or, to state it differently, the more vacuum you can get, the easier the water will boil. With the ordinary job, unless the runs be short and the pipes large, a small amount of pressure is necessary to completely fill the radiators. This must be generated at 212 degrees at the boiler. (I am talking for cold weather now.) Suppose that the job could be heated and not have to have any more fire at the boiler than would raise a temperature of, say, 150 degrees. (It can be done on less than that.)

That would mean the saving of 62 degrees heat every day and all the time that the heat was desired. It means more than that, for many of these vacuum jobs will hold the vacuum a long time after the fire has gone down to a point below where any heat is sent out through the system. Looks like a case of keeping your cake and eating it, too, don't it? But the main thing is to so arrange matters so that **the air can't get back into the radiators.**

This is accomplished in various different ways by the many vacuum systems that are sold to-day. In some of

these systems the air is pushed out while others have a pull on the air.

Again, some have a pump which is run by some power other than that which is generated by the boiler which heats the radiators in the system. In this case the pump can be set to furnish the amount of vacuum desired, and whenever this amount is reached, the pump cuts off, automatically. When the amount of vacuum fails to reach what the pump is set for, the pump starts working, and continues to do so until the desired point is reached. It will be seen from this description that such an arrangement has the advantage of furnishing a vacuum entirely independent of whatever the system furnishing the heat may be doing. A vacuum could be furnished, and the steam job entirely cold. Observe that in such a case the vapor would shoot around the job from the very first start the moment that it was furnished from the boiler, without having to wrestle with the problem of driving forth any air at all.

Many steamheating contractors whom I have talked with have refused to consider installing vacuum heating apparatus, claiming that it was impossible to get a job tight enough to hold. As a matter of fact that line of talk is all bosh, the result of either laziness or prejudice. When a shop has a good sized gas job to put in a house, or when a pump has to be connected, you do not hear much talk about its being impossible to get the job to work. It's "get the tools and go to it, and be sure to test the job out before leaving." The fitter or the plumber (as the case may be) at once proceeds to get busy and put in the work. He may have a few leaks, but you can bet that he knows enough to make them good before inspection. The same thing can be done on the vacuum line of work, if one has the desire, and besides, with the kind mentioned, where the pump works independently, it is not necessary to have the job absolutely tight unless one desires that the pump work as little as possible. The pump will maintain a "plausible" vacuum if there are a few small leaks.



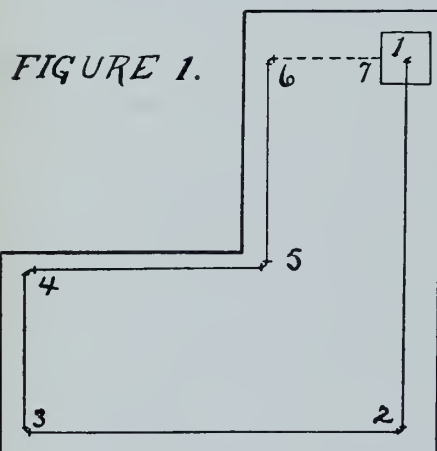
The Question Box



Subscribers are Urged to Send Questions to be Answered, or to Comment on Letters Published. Descriptions of Jobs Done or Shop Kinks are Also Invited.

PIPING FOR A "WING."

Editor Plumber and Steamfitter,—I have a house to pipe for steam. It has what is called a "wing" on it and the whole business is shaped very much like the letter "L" turned backwards. I wish that you would draw one or two mains, giving me your ideas on the mat-

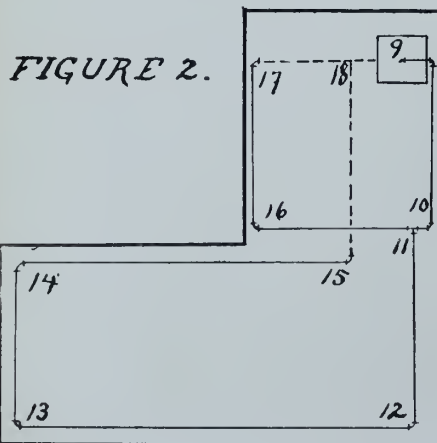


ter. The boiler has to set in one corner (at the top of the "L") and I am afraid that the runs will be too long to get good results. Trusting to see it in the next issue of your paper, which seems to grow better every number, I remain,

Yours truly,

Aug 23. James Quigley.

Complying with our subscriber's request, we publish two drawings. In Fig. 1 we have what is called the circuit system of heating by steam. It is to be doubted (in this particular case) as to whether it would be the better way to



run the main steam pipe. No branches are shown, it being obvious that they could be taken off at any point, except where the return drops, as shown by the dotted line "6" and "7." Should advise running the main full size from "1" to "5" if there are many radiators to be connected. The highest point will be at "1" just over the boiler and the main pitching away from boiler with a drop of at least half an inch every ten feet, and slung at about four feet distance from the cellar wall.

In Fig. 2, we have the circuit system with a loop added. Start high from the boiler at point "9," and let the fall follow the points "9," "10," "16," and "17," dropping from "17" for a wet return.

At point "11," you can rise out of the top of the steam main making point "11" and the high point of the loop and falling half an inch along "12," "13," "14" and "15."

From point "15" you can drop to the floor making a wet return and joining the other way return at point "18."

Join at "18" with a "Y" if you have one in stock.

If the height in the cellar is scant, the plan shown by Fig. 2 will most probably be more to your advantage. Nothing is said about pipe sizes as your question did not mention same.—D.C.H.

TELLING HEAT BY LOOK OF FIRE.

Editor Plumber and Steamfitter.—Can you give me any points on telling how hot a fire is by the way it looks? If you can, I should be glad to see it in the next number of your paper.

Aug. 10.

George S.

We find, upon looking up the matter, that a fairly accurate estimate of the fire's heat can be made from the following table which we publish. That is provided the one making the guess is not color blind, and is sufficiently familiar with the colors to recognize them when he sees same.

977 degrees heat, red, and just to be seen.

1,290 degrees heat, dull red color.

1,470 degrees heat, cherry red.

1,830 degrees heat, bright red.

2,010 degrees heat, dull orange.

2,190 degrees heat, bright orange.

2,370 degrees heat, white heat.

2,550 degrees heat, welding white.

2,730 degrees heat, dazzling white.

THE CAPACITY OF A WATERBACK.

Editor Plumber and Steamfitter.—Will you please give me some pointers on waterbacks in general as I see that you have had several things on them in the last few issues of the paper. Give size, construction and capacity.

Aug. 18.

C. H. Cook.

In construction many of the waterbacks are of cast iron. In size they are of about 110 square inches of heating surface which has a power of heating about 20 gallons of water per hour under the ordinary conditions. Probably more water than the amount mentioned could be heated, if the general condi-

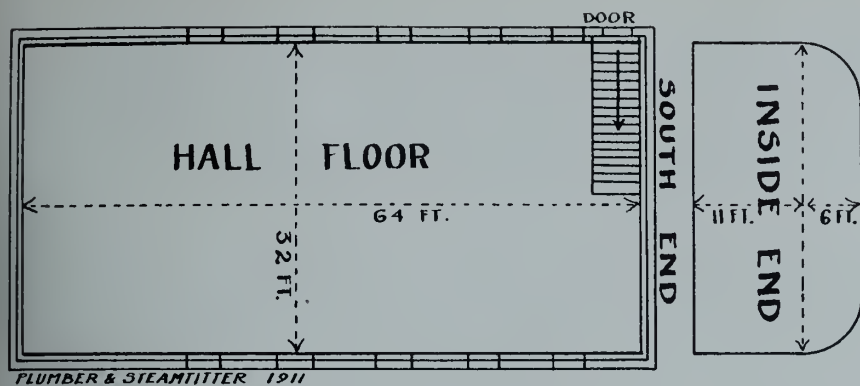
SEND IN PROBLEMS.

The "Question Box" is one of the most valuable features in Plumber and Steamfitter. It can be rendered still more useful if subscribers will send in problems, which they desired solved, or which they have themselves solved. The editor of this department is always willing to give any information that may be desired or to lend his assistance in finding a solution for any knotty trade problem. If possible send in drawings with each problem submitted.

tions were favorable; but one must remember that the average fire in the average stove is not burning full force all of the time and also that the surface of the waterback, in time, becomes coated with ashes and clinkers. If the surface of the waterback was kept cleaner than is generally the case, better heating results would be obtained. This also applies to the inside of the waterback, which so frequently becomes choked up from lime deposits.—D.C.H.

TO HEAT A HALL.

Editor Plumber and Steamfitter.—Will you kindly tell me in your next issue, how many feet of hot water radia-



tion it would require to heat a hall, as shown in the drawing, with satisfaction?

A. Binette.

Lachine, Aug. 7.

We should say that the 2-20-200 rule for steam, with an addition of one-third for the hot water, would give you all the radiation that was necessary. This rule allows one square foot of radiation to two square feet of exposed glass, and one square foot of radiation to twenty square feet of exposed wall and one square foot of radiation to two hundred cubic feet of air. To this amount of radiation add one-third for the hot water. Perhaps the job can be heated with less radiation, but an overplus of radiation with a small fire, is more satisfactory than a rushing fire and the hall barely warm.—D.C.H.

Editor, Plumber and Steamfitter.—I have been an interested reader of your journal for the past few months and I must say that I have been benefited, as well as interested through your columns. There were a few articles re syphonage of range boilers that interested me a good deal, as I have had several years' experience at the trade and I have never had any trouble in that way. I cannot see how it is possible for a boiler to syphon, but, however, if there is such a thing, please explain it for me.

Also can you tell me how many feet of radiation can be heated with a water front or water back (as the case may be) fitted to an ordinary cooking range.

E. L. MAHER.

Bradford, Aug. 13.

A siphon has a short leg and a long leg and, when placed in use, the correspondent must know that it will drain the vessel down to the end of the short leg, when the air entering the short leg at once breaks the action of the apparatus.

Now the cold water drop tube in the range boiler, as a continuation of the cold water supply from the street forms a mighty good siphon apparatus. If no air hole is punched in the cold water drop tube within the boiler and a cock is opened on the job (or there happens to be a small leak or a faucet that does not hold up) and the stop and waste is shut off to drain the job, what is there to prevent the regular action of the siphon? The result of such a condition will be that the water will be siphoned out of the range boiler down to the bottom of the cold water tube within the range boiler. For that reason it is a wise provision not to make this tube too long, but have it so the end will come about two inches above the level of the top of the water front. Then the water front will never be drained no matter if the boiler should syphon.

The writer asks how many feet of radiation can be heated with a water back? We have never seen a water back connected merely to radiators and can find no figures to that effect at present

writing. The water back has generally, the range boiler to heat. This should be considered first, as the heating of the radiator is a second consideration. For small rooms such as a small bed room or bath room, a radiator can be connected and made to give a fair amount of satisfaction. One should not expect too much, however, of such an installation, as it will be remembered that the fire in the cook stove is not run with full force all the time and also that the water front (or back) is liable to stop up and also to get covered, more or less, with ashes and clinkers. The writer would not advise putting more than twenty feet on such a connection, although he has seen more radiation than that so hooked to such an installation.—D.C.H.

WEST END PICNIC.

On Saturday, Aug. 19, a party of master plumbers from the West End, Toronto, held a picnic at High Park. A jolly time was spent, all reports being to the effect that it was one of the best events of its kind on record.

The group to the left is made up of the following leading lights of the West End (reading from left to right): Mr. Clark, of Winnipeg, R. H. Daniels, A. H. Read, E. T. Needham, W. C. Schultz, C. C. Hicks, G. F. Frankland and Harry A. Newland, of Anthes Foundry, Ltd.,

The picture to the right would seem at first glance to be one of the immortal Happy Hooligan, with his tomato can headgear—Happy Hooligan, grown much stouter and prosperous looking. Second glance, however, reveals the fact that it is a character picture of G. F. Frankland, whose popularity with the children is amply demonstrated. There is reason to suspect that the striking evidences of popularity in this instance can be traced to the fact that the genial "G. F." is holding a large watermelon in his arms.



Snapshots Taken at Picnic of West End Toronto Master Plumbers.

Plumbers Advertising in Canadian Newspapers

Good Ads. Are Effective in Initiating Business — The Repair Trade May be Built Up in This Way—Ads. Should Give Some Reasons for Expecting Business.

There are many indications that Canadian plumbers are becoming fully alive to the importance of newspaper advertising, in developing their business. Where, only a few years or even months ago, it was a rather rare thing to see a plumbing advertisement occupying a respectable sized space in the newspapers, it now sometimes happens that a plumber will take as much as half a page in his local paper, and will use good cuts and topical convincing copy.

Of course, not all plumbers are advertisers, even yet. There are scores who say that newspaper advertising would be no good to them, because they are personally in touch with all the architects and builders, and they get a chance to quote on most of the work that comes on. They do not think newspaper advertising would help them to secure any further contracts. It's a matter of putting in the lowest price, anyway.

Don't Neglect the Profitable Repairing.

Plumbers who look at the matter in this light, are undoubtedly neglecting the most profitable branch of the business. They are doing nothing to secure their share of the repair trade, which not only pays well on its own account, but helps to keep the plumber's working staff together, thereby averting the disorganization attendant upon a "slack season."

In catering to contract work alone, the master plumber (or sanitary engineer, to be more precise), runs a great deal of risk in any event, and is always under the necessity of paring as much off his tender as he possibly can, in order to stand a chance of landing the job.

With repair work, the householder when anything goes wrong, sends for the plumber who is best known to him, and, if the charge made is within reason, there will be no complaint. The best way to make your name familiar to the public, is to advertise in the newspaper, and the result of good advertising will be felt not only in the new customers that the business will acquire thereby, but also in the regular customers that will be added, if the work and prices are satisfactory.

Some Plumbing Ads. Reviewed.

On the opposite page are reproductions of some plumbing advertisements which have recently appeared.

The Cranbrook Plumbing, Tinsmithing and Heating Company's advertisement is

somewhat mysterious, inasmuch as it announces a compulsory removal, without making it very plain where they are moving. This ad. might be construed as an announcement of a retrograde step taken by the company. It would have been wise to explain that, though they were forced to remove, they were going to premises where they would have ample facilities, and would therefore be able to look after their work as well as if not better than before. The firm are to be commended for the large space they are using.

McArthur & Clef, in stating that their new stock has arrived, should also give some idea of the experience they have had in the plumbing line so as to give the public confidence in their ability to look after the plumbing and heating jobs.

A good point brought out by J. J. McNeely, is shown in the sentence: "We will call and look over your house, and give you an estimate on heating it, either by hot water or steam." Some people have the idea that plumbers never do anything gratis, but charge all they can for every minute of their time. The fact that Mr. McNeely is willing to give enough of his time to look over a house and give expert advice on its heating system, should be appreciated by everybody with any heating troubles. Mr. McNeely would do well to emphasize this feature.

Find Out for Yourself.

W. B. & H. R. Sime have a good idea for encouraging new business. The point that "an ounce of prevention is better than a pound of cure," should afford a cue to every plumber who advertises. The cut used is quite humorous, and, although not closely identified with plumbing, it should serve to attract attention.

Pearce & Davies have contented themselves with a simple announcement, in which they call themselves "Experts." They should give some information as to their experience and qualifications. It would help to bring business.

H. C. Pook has used good space, but his copy does not put forward any reasons for placing orders with him.

The Colbert Plumbing and Heating Co., are good consistent advertisers. They use space which would permit them to enlarge upon the guarantee they give with their work, a point which should prove a clincher.

P. Campbell & Co., in advertising their Contractors' Light, do not give much information about it. What does it burn? How much does it cost per hour to burn it? Answering these questions would materially strengthen the advertisement.

The Trenton Electric & Water Co.'s ad. is inserted because it advertises a line which the plumber could handle to advantage, especially if he has a department for electric lighting fixtures. The copy is fine, bringing out the very points which should be of service in persuading the housewife to buy. The cut gives a good idea of the toaster's construction, and, as prices are quoted and terms of payment carefully explained, the advertisement is really a model of effectiveness.

The Ottawa Hardware Co. advertisement is another of the mere card announcement variety, but it is attractively set.

Kennedy & Cunningham have a pretty good slogan. "We buy anything you wish to sell, and sell anything you wish to buy," sounds well, even though it is a sweeping statement. The plumbing feature of the business is not emphasized in the ad. as it should be.

News Briefs.

John Ross, of Hickson, has taken a position with Shearing and Flander, Tillsonburg.

F. Doughty, plumbing inspector at Moose Jaw, has been given an increase in salary of \$10 a month.

The contract for the plumbing and heating of the new St. Andrew's church, Stratford, has been let to McDonald and Henry.

The contract for installation of heating and plumbing in the Caroline street school has been awarded to Adam Clark, Main street west, Hamilton.

Kenneth Nesbitt, who has been employed as a tinsmith with C. H. Nesbitt, Avonmore, has gone for a trip through the western provinces.

Thomas Cotter, of Cotter Bros., Ltd., Winnipeg, plumbing and heating engineers, and Mrs. Cotter, have gone on a tour of the Pacific Coast.

UNIQUE FACTORY SCHEME.

A unique scheme, as far as Canada is concerned, is being considered in Moose Jaw, Sask. The idea is to put up a large factory building, to be supplied

with water, light and power, and to be subdivided into separate premises, these premises to be let to small manufacturers at low rents, with electric light, power and water, in such a manner as to enable them to work separ-

ately. A committee is working on the proposition, and they will try to induce companies who manufacture on a small scale, and patent holders whose capital does not permit them to establish large plants, to take up the idea.

FIRE IN FACTORY.

A fire broke out on Tuesday morning in the new wing of the Ontario Brass Co., at New Toronto. The blaze was discovered about 6.15 by one of the workmen and after an hour's hard work the flames were extinguished.

If You Own Your Own Home
If You are Going to Build One

If You are a Contractor or Builder

then you ought to know what good plumbing means to you.

You Ought to Learn the True Economy
of Guaranteed Plumbing

You are sure to be satisfied if you come to us for fixtures and service.

Colbert Plumbing and Heating Co.

LIMITED

726 Fort Street, Just Above Douglas



Contractors' Light

The most powerful and efficient portable light. Adapted for all conditions for railway, bridge, dock, mine, water works, lumber operations, all places where a convenient and powerful light is required. Very simple to operate, perfectly safe and cheap to run.

Highest testimonials from users.

P. Campbell & Co.

Lighting, Heating and Plumbing
73 Prince William Street



This Electric Toaster on
7 Days Free Trial in
Your Own Home

It makes the most delicious toast you ever ate. Piping hot, crisp and brown, two slices at a time, as fast as three or four persons can eat it. A dozen slices for less than a cent's worth of electricity—cheaper than alcohol heat—and safer too. No flame or soot—just turn on the switch. Use it on your table—as thousands do.

How To Get One

Call, postal or 'phone us and we will send one on trial. You can pay for it each month with your lighting bill at 50 cents a month for 12 months, or the cash price to our customers will be reduced from \$6.00 to \$5.00.

The Trenton Electric & Water Co., Limited.

BELLE-VILLE. - ONT

Plumbing Repairs

PROMPTLY
ATTENDED TO

The **Ottawa Hardware Co.**

Corner Bank and Somerset Streets.
Stoves and House Furnishings.
PHONE 1909.

Plumbing and Steamfitting

FIRST CLASS TIN-
SHOP---Repairing of
all kinds done.

SECOND HAND FURNI-
TURE AND STOVES

We buy anything you
wish to sell and sell
anything you wish
to buy.

**Kennedy &
Cunningham**

VOUGHT STREET

Compulsary Removal

The Cranbrook

Plumbing, Tinsmithing and Heating Co.

W. E. JOHNSON & SON, Props.

Business will be carried on in our old store on
Edward Street, (Crossing French Avenue)

REPAIRS A SPECIALITY

Everything in Tin and Iron Made to order. Blower system, Mine
Ventilation Expert

Hot air furnace, Hot water and Steam boilers

ESTIMES GIVEN

Phone 340

P.O. Box 904

Plumbing and Tinsmithing

Our complete stock of Plumbing and Tinsmithing material has arrived and we are now in a position to do all kinds of job work at greatly reduced prices in any part of the city or district.

PHONE
12

McArthur & Clerf

HOT WATER AND STEAM HEATING.

Pumps and All Sizes of Pipes
Both Black and Galvanized Iron.

Bathroom and Plumbing Fixtures
ALWAYS IN STOCK.

We will call and look over your house and give you an estimate on heating it, either by Hot Water or Steam.

J. J. McNeeley, Duke St.
13 y. Phone 113, CHATHAM, N. B.



FIND OUT FOR YOURSELF

if danger lurks in your sewer pipes or ventilation. Don't wait till it is too late. Use the "ounce of prevention" Instead of the pound of cure by calling in the plumber to examine your pipes and see that no dangerous gases are escaping, or you will have to call the doctor to cure diseases they have infected your family with. Have your plumbing sanitary and perfect and you will escape typhoid, diphtheria, etc. We will put your plumbing in order at a reasonable cost at

Next New Ontario Hotel,
Port Arthur Ontario

W. B. & H. R. SIME

Gas Fitting and Plumbing

By Experts

Pearce & Davies

Sydenham and John Sts.

Reports notwithstanding, we
are here to stay.

H. C. POOK

Successor to WM. ARCHIBALD

HEATING AND SANITARY ENGINEER
STEAM AND HOT WATER FITTING

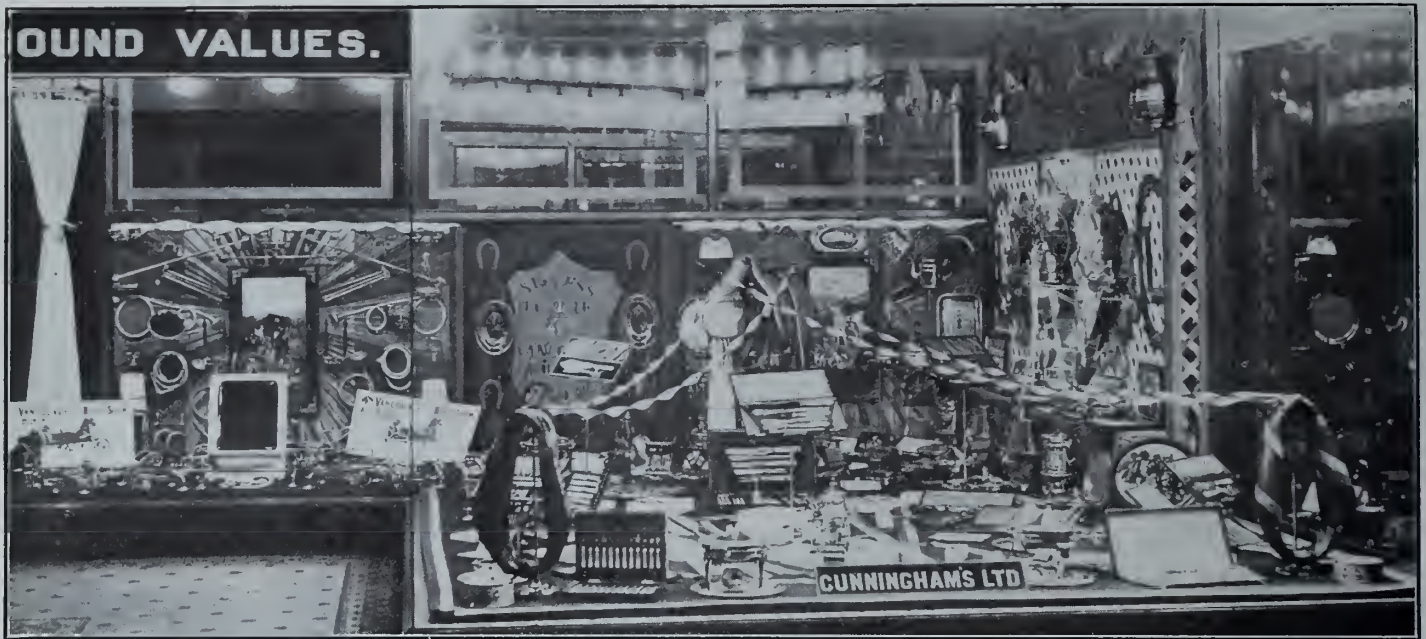
BATHROOM FIXTURES, A SPECIALTY

Estimates Given

WELLINGTON STREET

Phone 58

P.O. Box 265



A View of the Front of the New Store of Cunninghams, Ltd., Vancouver.—In the Left a Display of Plumbing Fixtures is Seen and in the Right Side a Stock of Hardware Goods.

The Value of Attractive Business Premises

The Man With the Fine Store Front and the Attractive Stock is the One Who Gets the Biggest Share of the Business— Descriptions of Two New Stores Which Have Recently Been Completed.

THE tendency toward better stores and more commodious workshops in the sanitary and heating trade is becoming more marked every day. The past year has seen the establishment of many new places of business which are highly creditable in every respect. Photographs have been obtained recently of two of the best and they are herewith reproduced. In both cases the firms run hardware stores in addition to their plumbing and heating departments.

Distinctive features have been initiated into the hardware and plumbing business of Cunningham's, Limited, Vancouver. This firm was originally F. W. Cunningham, and after several years' business a partnership was recently formed with J. A. Fortier, and the new store was opened just before the Christmas season. It is on the lower end of Granville street, the business thoroughfare that has come into prominence of late years, and is in a position to secure a fine and large trade. It has a frontage of 50 feet, with a depth of 120 feet, with basement full size. Even with this large floor space, additional premises, 50x120 feet, on Cambie street, are necessary to take care of the sheet metal works.

This western firm conducts the plumbing and heating end of the business

along progressive lines. It is stated that they have at the present time over \$50,000 in hand in heating and plumbing. Among other large contracts, they handled the plumbing and heating in the Cardiff apartments, and did three large buildings in the block in which they are now located.

The equipment used is thoroughly up-to-date. Electric power is used for the threading and cutting of pipe.

As will be seen from the accompanying illustration, Cunningham's, Limited, believe in window displays as a business-getting factor. One side of the window shown is devoted to plumbing and the other to hardware. The special occasion for which this window was dressed, was the Vancouver horse show. It will be seen that the settings are distinctly suggestive of all that pertains to the showing of the horse.

New Store in Preston.

One of the best known men in the plumbing and hardware business in Western Ontario is W. F. Mickus. He has been in Preston for fifteen years, and gradually his business outgrew the premises which he occupied. So, in the summer of 1910, he determined to remodel his store. The alterations were carried on without any interruption to

business, and, although the work consumed a great deal of time, it is now completed, and everything is in fine condition.

The front is very attractive, and is modern in every respect. It is 26 feet in width, and the two main piers, being built of green glazed brick set off with marble dust mortar, are a very striking feature. The large plate glass windows are supported by Thorne corner bars, which are practically invisible. Immediately above the plate glass are three lights of prismatic glass, held together by Thorne division bars. On observation, it will be noticed that this prismatic glass runs across the whole of the front, which makes every corner of the interior very bright.

The second storey is of red brick, which runs to the top cornice, the three large windows affording a well-lighted store room. The trimmings are of white stone, and both main and lintel cornices are of galvanized iron. The main cornice and pediment are of a very massive design.

The entrance, which slopes up from the street, is paved with cement, and, on either side, is a show or display window 7 feet by 10 feet in size.

Mr. Mickus keeps a large plumbing stock and also handles stoves and elec-

trical and gas fixtures. One of the most brisk departments is the tinshop, which is located on the first floor. He does a very large business in this line at the present time as building operations are particularly heavy in Preston.

The Value of Display.

It is impossible to estimate the full value of having up-to-date and attrac-

MEASURE WAS VETOED.

Due largely to the efforts of the New York State Association of Master Plumbers, a law was recently passed by the New York State Legislature to take effect September 1, providing for separate bidding on heating, ventilating, plumbing and gas fitting of State, county and municipal buildings. The measure, however, was vetoed by Governor

missions, charged with the duty of preparing specifications or awarding or entering into contracts for the erection, construction or alteration of buildings in any county, or city, or the borough of any city, when the entire cost of such work shall exceed \$1,000, must have prepared separate specifications for each of the following branches of the work to be performed: 1. Plumbing and gasfitting. 2. Steam-heating, hot-water heating and ventilating apparatus. Such specifications must be drawn so as to permit separate and independent bidding upon each of the classes of work enumerated in aforesaid subdivisions; and all contracts hereafter awarded must conform to this requirement by being separately awarded, it being provided that the firms or corporations shall be responsible and reliable. The authorities in charge of any county or municipal building, however, will as at present be permitted to have such work done as may be deemed advisable by their regular employes, or in the case of public institutions, by the inmates thereof.

BATH AND SINK.

An ingenious device has been put on the market by the Standard Kitchen-Bath Co., Cincinnati. It is a kitchen



The Fine New Store of W. F. Mickus, Preston, Ont.—The Two Main Piers are of Green Glazed Brick, With Marble Dust Mortar.

tive premises. A great many members of the sanitary trade are inclined to discount the advantage obtained, in fact to utterly disregard the matter. Any old place, seemingly, is good enough for them—a "lean to," a basement, the back of a store. But the fact remains that the fellow with the fine store front, the attractive stock and the progressive methods, is the one who gets the biggest share of the business.

Dix on the ground that it would involve increased expense to the State.

The bill, which is known as the Senate bill, introduced by Senator T. D. Sullivan, of New York, amends Section 1, Article 5 of Chapter 29 of the laws of 1909, by adding the following new section:

Section 88. Separate specifications for certain contract work. Every officer, board, department commission, or com-



bath combined with a movable sink, the idea being to thus economize on space in small homes. The combination affords adequate facilities for performing the regular kitchen work and permits of the room being used, as occasion requires, for bathing purposes. The illustration shows the bath tub of iron enamel, which is permanently connected with the waste, having an iron enamel receptor on the waste end, into which the drain from the kitchen sink flows to the one trap which answers for both. Only one set of faucets is required. The sink is mounted on casters at its four corners, and, being open at the back, sets against the wall.

Tenders are to be called for a store and office building at Vancouver to cost \$80,000.

GOSSIP OF THE TRADE

Moves to New Store.

W. C. Bennett, plumber and tinsmith, Kingston, has removed his place of business from 373 King street to 191 Princess street. Mr. Bennett handles stoves and ranges in addition to plumbing goods.

Started a Fire.

A plumber engaged in connecting up a gas pipe in the cellar at 418 Mentana street, Montreal, started a fire when he removed his cap. The blaze spread but was extinguished before any serious damage had been done.

Men Went Out.

The plumbers of Berlin and Waterloo are asking for a new arrangement, whereby they will have a nine-hour day and get Saturday afternoons off, in addition to an increase in wages. About twenty men left work Monday morning, August 21, in an effort to gain these concessions.

Big Contract Let.

At a meeting of the Saskatoon public school board when tenders for plumbing, heating and ventilation of the two schools under contract with Shannon Bros. and Cassidy were discussed, the award was made to Messrs. Thomson & Homer of that city, using the national system of temperature regulation and Canadian Buffalo forge air washer heating, coils, fans, etc. The accepted tender price on each school for this work is \$18,461.00.

Found Will in Pipe.

Secreted in one of the pipes, plumbers found the will of the late Joseph George, which had been missing, and for which diligent search had been made by interested parties. The will was that made by the deceased in 1906, and has been indentified by the witnesses thereto. Deceased passed away about a year ago, and at that time the will could not be found. Search was made, and his grave was opened to see if the much-wanted document had been placed in the casket. Now the mystery has been cleared up.

Running for House.

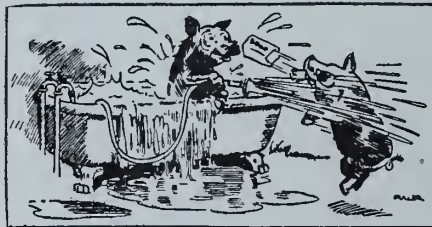
W. G. Weichel, Waterloo, has accepted the Conservative nomination for North Waterloo and is opposing Hon. W. L. M. King.

Plumbing Shop Burned.

The plumbing shop and workrooms of M. F. Burns, Halifax, were burned a few days ago. The fire when first seen was burning about the foot of the stairway and quickly made its way up to the workroom where it was burning when the apparatus arrived. The upper portion was gutted and the roof damaged. Mr. Burns estimates his loss at about \$1,000 with no insurance.

Fight for Their "Tub."

Caldwell, N. J.—Frederick Heller, a local politician and stock raiser, has just installed in the rear of his home a bathtub which is to be used exclusively for the cleanliness and comfort of two



pize winning black Berkshire pigs. Twice daily the tub is filled with fresh water and then follows a fight between the young porkers for the privilege of the first bath.

Improving Sewerage System.

One of the largest enterprises of the city of Moose Jaw this year is in connection with its sewerage system. Approximately \$400,000 is being spent on it. The main reason why so much of the activity of the city construction department is this year devoted to the sewer system is that practically nothing was done last year because the city had no adequate method of disposal of the sewage. On this account further extensions of the system were forbidden by the government. Consequently, this year, not only have the extensions and

house connections of two years to be made, but new trunk sewers and a large sewage disposal plant have to be built.

Partnership Dissolved.

John McCormick and Henry Ross Sime, of Swift Current, plumbers and tinsmiths, have dissolved partnership.

Plumbing Department.

The Day Hardware Co., Red Deer, Alta., have established a plumbing department and tinshop in connection with their business.

Have Many Contracts.

Hamilton & Stott, St. Thomas, have published in the local papers a list of the contracts they now have in hand. The list is a lengthy one, containing over twenty names.

Made Large Shipment.

The firm of Bernhardt & Gies, Preston, have made large shipments of supplies to Medicine Hat, to enable them to complete their contracts there. In the absence of Mr. Gies, the plumbing, heating and tinwork is in charge of Andrew Spalding.

In Black Fedoras.

The Winnipeg journeymen plumbers have decided to turn out in the Labor Day parade in a particularly swell outfit. They will dress in white shirts and black trousers with black fedora hats. In addition, each member will sport a nickel plated cane.

Starts Business.

T. G. Sharp, plumbing and heating engineer, has opened up business in New Liskeard. He has secured offices in the Evans' block and advertises: All kinds of plumbing, heating and tinsmithing executed in a prompt and efficient manner. Estimates cheerfully furnished. We have had twenty years' experience in the business and guarantee satisfaction."

T. H. Percival, sheet metal worker, has moved into larger premises at Kit-silano, B.C.

News of the Manufacturers and Wholesalers

BACK FROM EUROPE.

Frank T. Rawley, the Canadian manager of the Honeywell Heating Specialty Co., has returned after a business trip, of fourteen weeks duration, to Europe.

The object of Mr. Rawley's visit was to introduce the products of his firm into the European countries. He visited Great Britain, France and Germany and made arrangements for the commencement of manufacture in those countries. Owing to the shortness of his trip, he did not do much "missionary" work but he nevertheless found time to get out among the trades in the countries he visited. In the British Isles, he found the plumbing trade thoroughly up-to-date, but in heating work they did not measure up to the same standard. This is due to the fact that the weather there is comparatively mild and the necessity for heating facilities is not as pronounced as in this country. In France, the heating trade is on a high plane. They do not require much in the way of heat but, what they have, they want right. "They think before they do anything over there," said Mr. Rawley. "Some of the trade here do a thing and then think about it after."

He will stay in the Canadian field until the fall and then expects to return to Europe. He will cover more ground then, going right through to Russia.

TO START IN CANADA.

Adolph, Philip and Oscar Mueller of the H. Mueller Manufacturing Co. have returned to Decatur, Ill., from a trip to Canada whither they went with the purpose of selecting a site for a factory for the manufacture of Mueller goods on Canadian soil. They have not yet reached a definite conclusion as to the most advantageous point at which to locate. They visited a number of places in this country.

It is the intention of the company to erect a factory in Canada, to employ at the start about seventy men, which will be increased as the branch develops and grows.

In commenting on the plans of the company, the Decatur Review says:—

The Messrs. Mueller came back deeply impressed with the marvelous business, manufacturing and agricultural possibilities of that rapidly progressing country. Evidences of sound business principles underlying all public and private enterprise were noted in every city. There is an air of rapid and sub-

stantial development, tempered with conservatism and carefully thought out judgment, which has taken into account the future of the country. Canada is unquestionably a country with a magnificent prospect of reaching an exalted position in the commercial ranks of leading nations of the world. It is just awakening, a giant domain springing into active life. The strides already taken are wonderful, considering that two decades encompass the present progress. The people there have the American push and hustle, modified by the well known British conservatism, which gives solidity and permanence to each undertaking.

TO LOCATE IN WEST.

L. W. Kelly, a prominent business man of Aberdeen, S.D., was in Regina recently, looking over available sites for the erection of a distributing house in this city for wholesale plumbing and heating apparatus.

Mr. Kelly before going to Regina also visited a number of other cities in the Canadian West.

FITTINGS LTD. OUTING.

The employes of Fittings Limited and Malleable Iron Co., Oshawa, held their annual outing at Alexandra Park on Saturday, August 19. It had been intended to hold an excursion but it was found impossible to make suitable railway arrangements.

A big programme of sports was arranged and the Citizens' Band furnished music for the day. Over sixty dollars had been secured for prizes.

A football tournament had been arranged, four teams of five men a side having entered. The machine shop team with E. Dobney as captain won out. The single men beat the married men at baseball. Batteries, Sanford and Lehmann, and Carey, Flath and Wadellf.

Among the races run off were: Quarter mile, fat man's race, races for boys and girls, bun-eating contest, ladies' baseball throwing contest, walking race, hobble skirt race, half-mile race, ladies' needle threading, shot putting, standing broad jump, running broad jump, hop, step and jump, 100 yards dash, and bicycle race.

A big feature was the tug-of-war. Five teams had been entered from different departments. It was won by the tapping room with the pattern makers second.

VOTING ON BY-LAW.

The ratepayers of Grimsby, Ont., will on Sept. 5, vote on a by-law to make a loan of \$10,000 to the Radiant Electric Co.

A WATER HEATER

J. W. Guimot has taken out a Canadian patent for a water heater.

HAVE ENLARGED PLANT.

The plant of the Moffat Stove Co., at Weston, Ont., has been enlarged during the present year to one-third of its total capacity. The work of extension was started last fall, being completed at an early date this year. The output of the plant has been largely increased as a result of the extension.

ESTABLISHING TORONTO BRANCH.

Chas. B. Waldron, of Winnipeg, is in Toronto this week, making arrangements to establish a branch in Toronto, to handle his heating specialties.

Mr. Waldron's main lines are the Spencer magazine boiler and Storm King furnace, for which he has held the western Canadian agency, with headquarters at Winnipeg. He has now secured the agency for the Dominion, and the new Toronto branch will look after the eastern territory.

It is expected that arrangements will soon be made to manufacture the Spencer boiler in Canada, and the intention is to establish a plant at as early a date as possible.

FIRST TO USE POWER.

The Hahn Brass Co., New Hamburg, Ont., are running their plant by Hydro-Electric power, being the first concern in that place to start the use of "white coals" from Niagara Falls. A fifty horsepower electric motor has been installed.

ENLARGING PLANT.

Plans are now being prepared by an American expert for the Manitoba Cold Storage Company, which will more than double the present premises of the concern. When the improvements are complete the building will be a monster one, eight stories in height. It will be 367 feet in length and 70 feet in width. The addition will cost between \$250,000 and \$300,000, and will give two million cubic feet of storage space to that now in existence.

PLUMBING AND HEATING MARKETS

MONTREAL.

Montreal, Aug. 31.—The trade is generally busy just now but opinion differs as to what the future will bring. Some feel that there may be a period of dulness, but that remains to be seen. At any rate, business has not been as heavy as was expected in the spring when everything seemed to point to a very bright summer, but during the past two months there has been some slackness felt. There is considerable building work under way and recently it was reported that the number of building permits issued during one day was as large as those of any other day during the season. But it is felt that this is spasmodic. It is difficult to try to tell what the future months will bring the trade, but it is significant that some doubts are entertained.

Enamelware.—A fair demand is reported just now and through the fall season it is expected that business will hold its own. The trade are engaged at general work and of the present demand there is a fair percentage of business in enamelware goods.

Soil Pipe.—Business in this branch keeps up well. There is no new feature to the market, however. Discounts quoted are heavy pipe, 70 and 10; 7 and 8 in. pipe, 50; light pipe, 60 and 10, and fittings are 75.

Iron Pipe.—There has been a good healthy demand for practically all lines of iron pipe. Business should continue of this nature for quite a time yet. Discounts on fittings are malleable fittings, 40; cast iron, 60; flanged unions, 65; nipples 75 and 10; malleable lipped unions, 65 p.c.

Metals.—Lead and spelter have been quite firm and tin at 46 has remained steady. The demand for sheets and plates has been good and the metal market is in a satisfactory condition. Lead and spelter are both stronger and higher in price.

Solder.—Business is steady and likewise prices. Half and half is quoted at 24½ cents, and wiping at 22.

TORONTO.

Toronto, Aug. 28.—Business is becoming very brisk both in plumbing and heating. Local manufacturers and jobbers are finding some difficulty in filling their orders. This is particularly so in the case of some sizes of pipe. It is not possible at this juncture to secure galvanized pipe of some sizes in sufficient bulk to meet the demand.

In the plumbing trade there has been a distinct improvement during the past two weeks. The demand for all lines has grown to fall proportions and this

condition of affairs will continue steadily now.

Enamelware.—Advice orders are still being placed but shipments have grown of late. Most of the orders are coming in for present requirement as the plumbing trade is now very busy. There has been a particularly heavy demand in the city, where the contract work this fall is reported to be exceptionally heavy. There has been a good demand from this province, however. Prices remain firm.

Boilers and Radiators.—Heavy shipments are now the order. "We are going at our highest capacity," said one manufacturer, "and there is so much business ahead that I fully expect to see the present condition continue right through the fall. We have shipped several carloads in the last few days." Boiler orders, placed some time ago, are now being filled. The demand for radiators is heavier than at any time this year and is keeping pace with the business in boilers.

Soil Pipe.—There is a consistent call for all sizes of soil pipe. The price situation is still a little vague, a tendency to cut still being noted. The prevailing quotation on medium and heavy soil pipe is 70 and 10. On the 7 and 8-inch sizes, the discount stands at 50 per cent.

Lead Pipe.—The price of lead pipe remains at the advanced figure set last week, 27½ cents being still the prevailing quotation. There is a healthy demand. Lead waste sells at 9c per lb. and caulking lead at 4½ cents. Traps and bends are quoted at 50 per cent. discount.

Iron Pipe and Fittings.—The difficulty experienced in getting ½-inch galvanized pipe noted in last issue is felt as keenly as ever. "We could sell 1,000 feet a day," said one jobber, "if we could get it. The demand is outstripping the supply just at present in a very marked degree." In view of the situation which has developed, the price in ½-inch and in other sizes, which are also more or less hard to obtain, remains quite firm. Cast iron fittings are quoted at 65 to 70. Malleable fittings stand at 37½ to 40 per cent. Other quotations are: cast iron bushings, 70; malleable, 67½; nipples, 75 and 10; headers, 60 and 10, although some quote 67½ and 70; flanged unions, 70; malleable-lipped unions, 67½ per cent.; galvanized pipe, \$6.18; black pipe, 1-inch size, \$4.54.

Solder.—The prices remain as high as ever, owing to the continued high price of tin. Wiping, in the common grades, sells at 22 cents, the better

grades bringing 26 cents. Half-and-half sells at 27½ cents.

Metals.—Metals are quite active at the present time. Of course, heavy buying is not expected in August. The factories are hampered by the absence of employees on holidays and this, combined with the heat, conduces to delay in ordering and purchases of metal are made almost entirely on the hand to mouth plan. Still, for the time of year, business is now quite satisfactory.

There is no disguising the fact that trade on the other side of the line is bad. American industries are in far from a healthy condition and this has to a certain degree retarded progress here. The effect on the Canadian markets is smaller than might have been anticipated but it has been felt nevertheless. The state of the American markets is the only dark spot on the horizon at present.

Tin.—The situation locally presents no new features. The price stands at 46 cents and there is an active demand. There have been developments on the New York market, the price sagging there rather markedly, but the trade here has not responded to any degree. municipal undertakings

BUILDING NOTES.

A large rink is to be built at Victoria, B.C.

The Quebec Central Railway will erect an office building at Quebec.

A prison farm building is to be erected at Burnaby, B.C.

A \$55,000 nurses' home is to be built at Edmonton, Alta.

A new Y.M.C.A. building is to be erected at Westville, N.S.

Plans have been prepared for the new post office at Chilliwack, B.C.

Storm sewers are to be constructed this year at Saskatoon, Sask.

A new school is to be built in the Homedale district, Brantford, Ont.

An extension of the waterworks system at North Bay has been started.

An extension of about 27 miles is to be built to the Calgary waterworks.

Work is progressing on the new \$35,000 high school at Dunnville, Ont.

A Methodist church, to cost \$12,000, will be built next year at Oakwood, Ont.

Plans have been prepared for the reconstruction of the Baptist church at Strathroy, Ont.

The ratepayers of Oakville, Ont., have adopted the by-law providing for a sewerage system.

The parish of St. John's church, Saskatoon, Sask., will erect a new church to cost \$75,000. A rectory to cost \$13,000 is also under consideration.



**We Extend to
The Trade a
Hearty Welcome**

to visit us in our new Building at
119 Adelaide Street West
during their stay in Toronto while attending
the Exhibition.

THE NATIONAL PLUMBING SUPPLY CO.
TORONTO Limited



Hot Water Quick Opening Radiator Valve.

"Miller" Hot Water and Steam Radiator Valves

The bodies and bonnets of our Hot Water Quick Opening Radiator Valves are made in one piece, thus having a great advantage over other valves, as it leaves one less joint for possible leakage. The cone-shaped Disc prevents sticking.

Our superior Steam Radiator Valves have very low seats and a high lift of Disc.

We manufacture both valves from $\frac{1}{2}$ " to 2", with or without union, also union elbows.

Every valve is thoroughly tested and has an unlimited guarantee. They are built for service. Ask your jobber for them.



Steam Radiator Valve.

MILLER LIMITED, - LONDON, CAN.



KERR
Steam and Hot Water
RADIATOR VALVES

are past the experimental stage.

They set the standard for high quality in material and finish and stand the many tests of use.

Note the seats in Kerr's New Pattern J.D. Radiator Valves which insure perfect drainage.

The Kerr Engine Co., Ltd.
VALVE SPECIALISTS
Walkerville - - Ontario

Dart Unions

GIVE



SAVE

PROFIT

LABOR

SATIS-
FACTION

TROUBLE
EXPENSE

Your Jobber Has Them

DART UNION CO., LTD.
TORONTO, CANADA

Dart Unions are made only with bronze to bronze ground joints with heavy iron ends and have the name DART cast on every one.

BLACK OR GALVANIZED

They are guaranteed to fulfill all our claims.

Condensed or "Want" Ads.

BUSINESS CHANCES.

FOR SALE—Plumbing and heating business at invoice price. Box 514, PLUMBER AND STEAMFITTER, Toronto. (19)

FOR SALE—Plumbing, Heating and Tinsmithing business in Ontario town of 9,000. Established eight years. Excellent reasons for selling. Apply Box 579, PLUMBER AND STEAMFITTER, Toronto. (17)

WANTED.

WANTED—Traveler for territory east of Toronto to Quebec for well-known manufacturers of plumbing materials, gas stoves, ranges and water heaters. A good proposition for the right party. Address "Manufacturer Plumbing Supplies," care PLUMBER AND STEAMFITTER, Toronto, stating age, full experience and references. (16)

MISCELLANEOUS.

ADDING TYPEWRITERS write, add or subtract in one operation. Elliott Fisher, Limited, Room 314, Stair Building, Toronto.

ACCURATE COST KEEPING IS EASY if you have a Dey Cost Keeper. It automatically records actual time spent on each operation down to the decimal fraction of an hour. Several operations of jobs can be recorded on one card. For small firms we recommend this as an excellent combination—employees' time register and cost keeper. Whether you employ a few or hundreds of hands, we can supply you with a machine suited to your requirements. Write for catalog. International Time Recording Company of Canada, Limited; office and factory, 29 Alice Street, Toronto.

BUSINESS-GETTING Typewritten Letters and real printing can be quickly and easily turned out by the Multigraph in your own office—actual typewriting for letter-forms, real printing for stationery and advertising, saving 25% to 75% of average annual printing cost. AMERICAN MULTIGRAPH SALES CO., Limited, 129 Bay St., Toronto.

COPELAND-CHATTERSON SYSTEMS—Short, simple. Adapted to all classes of business. The Copeland-Chatterson Company, Limited, Toronto and Ottawa. (11)

COUNTER CHECK BOOKS.—Write us to-day for samples. We are manufacturers of the famous Surety Non-Smut Duplicating and Triplicating Counter Check Books and Single Carbon Pads in all varieties. Dominion Register Co., Ltd., Toronto.

COUNTER CHECK BOOKS.—Especially made for the plumbing and steamfitting trade. Not made by a trust. Send us samples of what you are using—we'll send you right prices. Our binder with patent carbon attachment has no equal on the market. Supplies for binders and monthly account systems. Business Systems, Limited, Manufacturing Stationers, Toronto.

DOUBLE your floor space. An Otis-Fensom hand-power elevator will double your floor space, enable you to use that upper floor either as stock room or as extra selling space, at the same time increasing space on your ground floor. Costs only \$70. Write for catalogue "B." The Otis-Fensom Elevator Co., Traders Bank Building, Toronto. (11)

EGRY BUSINESS SYSTEMS are devised to suit every department of every business. They are labor and time savers. Produce results up to the requirements of merchants and manufacturers. Inquire from our nearest office. Egray Register Co., Dayton, Ohio; 123 Bay St., Toronto; 258½ Portage Ave., Winnipeg; 308 Richards St., Vancouver.

FIRE INSURANCE. INSURE IN THE HARTFORD. Agencies everywhere in Canada. (11)

HUNDREDS OF TYPEWRITERS of every make and condition are being traded in as part payment on the famous MONARCH. Price and quality are the levers we use to prevent over stock. We believe we can give the best bargains in rebuilt typewriters in Canada. A postal will bring our catalogue and full information. The Monarch Typewriter Co., Limited, 46 Adelaide Street West, Toronto.

KAY'S FURNITURE CATALOGUE No. 306 contains 160 pages of fine half-tone engravings of newest designs in Carpets, Rugs, Furniture, Draperies, Wall Papers and Pottery with cash prices. Write for a copy—it's free. John Kay Company, Limited, 36 King St. West, Toronto.

MOORE'S Non-Leakable Fountain Pens. If you have fountain pen troubles of your own, the best remedy is to go to your stationer and purchase from him a Moore's Non-Leakable Fountain Pen. This is the one pen that gives universal satisfaction and it costs no more than you pay for one not as good. Price \$2.50 and upwards. W. J. GAGE & CO., Ltd., Toronto, Sole Agents for Canada.

MODERN FIREPROOF CONSTRUCTION. Our system of reinforced concrete work, as successfully used in many of Canada's largest buildings, gives better results at lower cost. "A strong statement" you will say. Write us and let us prove our claims. That's fair. Leach Concrete Co., Limited, 100 King St. West, Toronto.

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THE "Kalsmszoo" Loose Leaf Binder is the only binder that will hold just as many sheets as you actually require and no more. The back is flexible, writing surface flat, alignment perfect. It cannot get out of order. No exposed metal parts or complicated mechanism. Write for booklet. Warwick Bros. & Rutter, Ltd., King and Spadina, Toronto.

WAREHOUSE AND FACTORY HEATING SYSTEMS. Taylor-Forbes Company, Limited. Supplied by the trade throughout Canada.

YOU don't buy a National Cash Register—it pays for itself. Saves money. Prevents mistakes. We can prove it. National Cash Register Co., 285 Yonge Street, Toronto.

ONE of the most successful retailers of late years says: "When a firm advertises in trade papers it is getting into good company. As I pick up one of a dozen of these periodicals here in my office, and glance through it, I find that the best people, the successful firms, are represented in such a way as to reflect their importance in the trade."

Nature has solved the problem of distribution. It uses a multitude of agents to effect the distribution of its products.

Nature does not expect every seed to fall upon fallow ground and to take root. But, it achieves a profitable percentage upon its distribution. This is all that an advertiser has to do to reap a profitable harvest on his outlay.



Irregular Pinches! Vulcan Vise

is not alone far superior as a tool for regular pipe and fittings work, but really "the only grip," for objects otherwise out of the question in regular bench vise.

It isn't any bigger than a box of Biscuits, and you can wind up an unfailing grip as easily as you do your clock, but in one-tenth the time.

You get a gripping service within the wide range of from ½ in. to 4½ in. diameters, in one "handful" of tool.

You get an enduring, unbreakable-in-service tool that must in every way confirm the manufacturers' guarantee.

"I wouldn't take \$10.00 a piece for them to-day if I couldn't get another."—Moore.

They won't cost you as much! Consult your dealer.

J. H. WILLIAMS & CO.

Superior Drop-Forgings.

77 Richards St., Brooklyn, N.Y.



DIRECTORY OF MANUFACTURERS

Plumber and Steamfitter receives, from time to time, enquiries for the names of manufacturers of various lines. These enquiries come from firms who usually intimate they have looked through Plumber and Steamfitter but cannot find any firm advertising the line in question. In many cases these firms are anxious to secure the information at once. This page enables manufacturers to keep constantly before the trade lines which it would not pay to advertise in larger space.

EMERY WHEELS.



Canadian Hart Wheels
442 Barton St. East, Hamilton
Corundum and Emery Wheels
Grinding Machines, Beaver Oil Stones.

SHELF BRACKETS.



Will Hold Up a Shelf
That's what a shelf bracket's for
For this purpose there can be
NOTHING BETTER, NOTHING
CHEAPER than the **BRADLEY STEEL**
BRACKET. It is well Japanned, Strong and
Light. The saving on freight is a good profit
aside from the lower price at which the goods
are sold. Order direct or through your jobber.
ATLAS MFG. CO., NEW HAVEN



THIS IS THE DAY OF INVESTIGATION

Get in line and let us prove
to you that the

GENUINE
Armstrong Stocks and Dies

ARE THE BEST.

Catalogue on request.



The Armstrong Mfg. Co.
317 Kewilton St.
Bridgeport, Conn.

When writing advertisers kindly men-
tion having seen the advertisement in
this paper.

FILTERS.

Anti-Splash Tap Fitters
The "Galvo" Filter and Water Steriliser
"Perfection" Fire Extinguishers
There's good money in them for hardware dealers.
Write for Prices.
The Anti-Splash Filter Co.
OWEN SOUND - - ONTARIO

MANUFACTURERS' AGENTS.

SIPHONS
FOR
SEPTIC TANKS
ALLAN POPE :: MONTREAL

MANUFACTURERS' AGENTS.

Western Distributors, Limited
CUSTOMS BROKERS
Wholesale Commission Merchants and Manufac-
turers' Agents. Cars Distributed, Warehoused
and Forwarded. Warehouse on Trans-
fer Track. Business solicited.
OUR POSITION IS YOUR OPPORTUNITY
SASKATOON, WESTERN CANADA

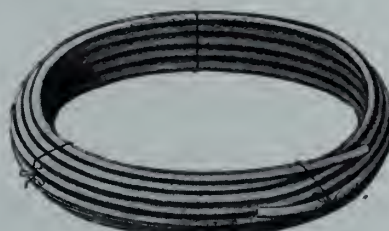
BRONZE POWDERS BRONZE LIQUIDS

The
**Canadian Bronze
Powder Works**
Montreal Toronto
Works, Valleyfield

Send us your orders and we guarantee the
quality

WE MANUFACTURE FOR THE PLUMBER

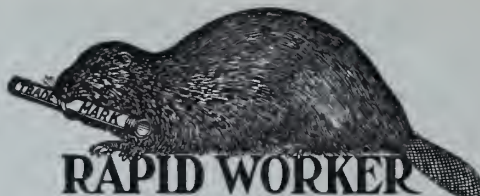
LEAD PIPE
LEAD WASTE
HYDRAULIC
DRAWN TRAPS
NON-SIPHON
CENTRIFUGAL
CAST TRAPS



1-8 to 8 inches
WRITE FOR PRICES

SOLDER
FOR ALL
REQUIREMENTS

The Canada Metal Co., Ltd., FRASER AVE., Toronto



One man with a Beaver Die Stock is worth two or three men with any other Die Stock made.

"Beaver" Adjustable Die Stocks

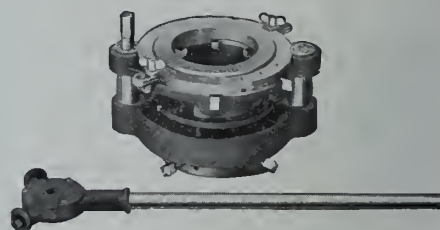
HAVE cut the cost of pipe threading in two because they will thread all sizes of pipe without changing dies. They are built on the receding principle which positively enables one man to thread any size of pipe and produce absolutely tight joints for all work, including hot water. They save the time formerly used up in changing dies and looking after loose parts, and eliminate all of thread-stripping when backing off.



No. 25A, threading 1, 1½, 1½, 2-inch pipe.
A boy can operate it,



No. 6, threading ¼, ½, ¾, 1 inch, complet



No. 60. Uses two sets of dies. One set cuts 2½, 3, 3½ in. the other cuts 4, 4½, 5, 6 in.; they are inserted without removing any parts.

No loose Bushings or loose Dies on No 25A and No 6, and they cut 1, 1¼, 1½ and 2-inch pipes.
We can furnish a separate set of dies for 1, 1¼, 1½ and 2-inch pipe

Write us for Illustrated Price Lists.

BORDEN CANADIAN COMPANY,
66 Richmond Street East Toronto, Ontario

22 Men Average \$24.50 a Week

This is the record of twenty-two circulation representatives of the MacLean Publishing Company, for the week commencing April 3rd and ending April 8th, 1911.

Do you realize that the most competent business man of to-day is the one who has had experience in selling, who has attained the qualities of a salesman?

No work affords such possibilities for this training as does circulation work.

The MacLean Publishing Co. have a number of attractive positions open for men to represent their thirteen publications. The work could be handled during spare hours.

The record stated above of 22 of our representatives, illustrates the possibilities. You have an equal chance.

Write for particulars to

MacLEAN PUBLISHING CO.
149 University Ave. Toronto

Use the Long Distance Phone

To order any supplies you may need in a special hurry.

You see, we have been a hundred years perfecting our facilities and we can give you unrivalled service. Under the name of

“SCOTIA” PLUMBING SUPPLIES

We sell all the leading lines of Plumbers' Supplies made in the world.

Big stocks always on hand—prompt shipment made—prices as low as good quality permits.

Wm. Stairs, Sons & Morrow, Limited
ESTABLISHED A.D. 1810

Halifax - - - Nova Scotia



SOVEREIGN BOILER

HIGH EFFICIENCY

is due to the many years we have spent in an effort to produce a boiler that is far beyond competition.

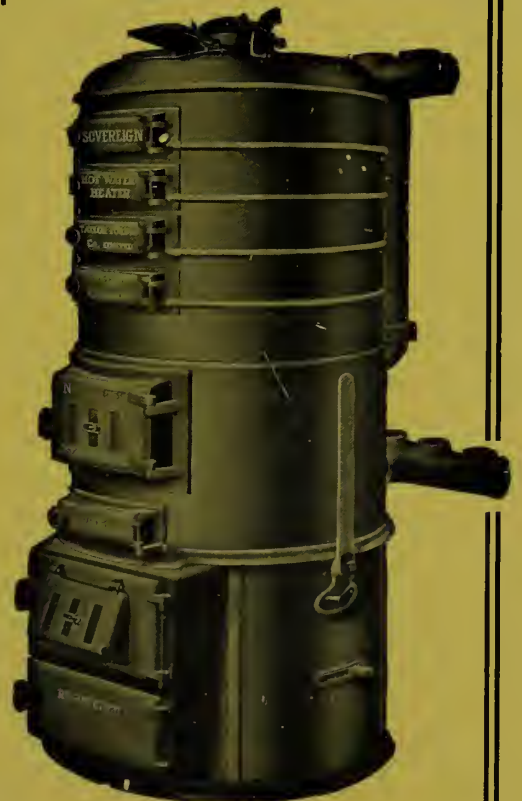
It is so constructed that no fuel can be lost in the ash pit, and all heat generated comes directly in contact with the surfaces to be heated.

The "Sovereign" has greater durability than any other boiler now manufactured. The ease with which it can be operated and the rapid circulation of water assure economical results from fuel used. Shortly after buying from us you will realize your good investment by pleasing your customers.

Write for descriptive catalog.

Taylor-Forbes Co., Limited
GUELPH, ONT.

TORONTO: 1088 King St. W. Taylor-Forbes Co., Ltd., 246 Craig St. W., Montreal, Que. Taylor-Forbes Co., Ltd., 1070 Homer St., Vancouver, B.C. W. R. Mathers, 46 Princess St., St. John, N.B. H. R. Moulden & Son, Travellers' Bldg., Winnipeg, Man. The Mechanics Supply Company, Quebec, Que.





ASTORIA

AVOID COMPLAINTS THEY EAT UP YOUR PROFITS

It is annoying after you have finished a job, to have your telephone wire kept hot with the complaints of a dissatisfied customer. This can be prevented by using reliable fittings and supplies on every job. The Morrison Line of Plumbing Supplies are thoroughly reliable. We guarantee every article we sell to be exactly as represented.

In W.C. outfits you will find these lines to be thoroughly satisfactory.

"QUALITY"

Closet Combinations

"Elgin" Washdown

"Simplex" Syphon Jet

"Astoria" Square Back Syphon Jet

All our low-down outfits are furnished with our Patent Combined Ball Cock with Shut-off Cock. This is the simplest and most efficient on the market, with full weight copper lining.

THE

James Morrison Brass Mfg. Co.
LIMITED

Toronto

...

...

Ontario

Quality Empire Extra Compression Bibbs

EXTRA Quality Metal Used

EXTRA Workmanship

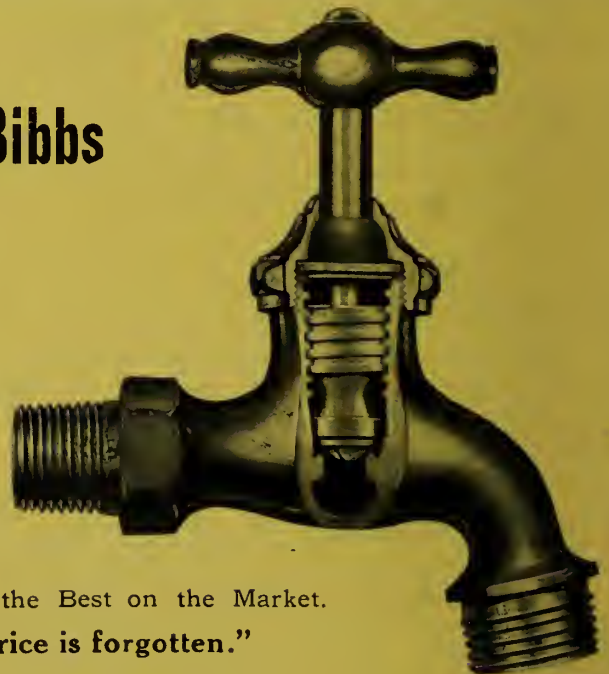
EXTRA Guaranteed

EXTRA Fine Working Parts

SQUARE THREADS

ENCASED SEAT

SPECIAL PACKING



Make the Empire Extra Quality Compression Bibbs the Best on the Market.

"The Quality remembered long after the Price is forgotten."

Our name in full or the letter "E" on everything we make.

Empire Manufacturing Company, Limited, London, Ontario

Manufacturers of the Famous EMPIRE Closets, Absolutely Guaranteed.

PLUMBER & STEAMFITTER

and Sanitary Engineer of Canada

THE MACLEAN PUBLISHING COMPANY, LIMITED, PUBLISHERS

MONTREAL, 701-702 Eastern Townships Bank Bldg.
LONDON, ENG., 88 Fleet St. E.C.

TORONTO, 143-149 University Ave.

WINNIPEG, 34 Royal Bank Building
NEW YORK, 115 Broadway

Vol. V.

Publication Office : TORONTO, SEPT. 15, 1911.

No. 18

THE
STANDARD
COMPANY LIMITED
GENERAL OFFICES AND FACTORIES · PORT HOPE · CANADA

PLATE F 517

THE
STANDARD
AUTOMATIC INDIVIDUAL BOWL
SYPHON ACTION
RANGE CLOSET

The most perfect range closet ever produced.

Write for our booklet "E," showing our Range Closets and Urinals and giving roughing measurements.

BRANCH OFFICES AND SHOWROOMS

TORONTO 119 KING STREET EAST	MONTREAL 44 BEAVER HALL HILL	WINNIPEG 76 82 LOMBARD ST
--	--	-------------------------------------

PLUMBER AND STEAMFITTER

Beaver Brand

Cast Iron Enameled Ware

Unsurpassed for Pure Whiteness of Color,
Attractiveness of Design, Finish and Durability.

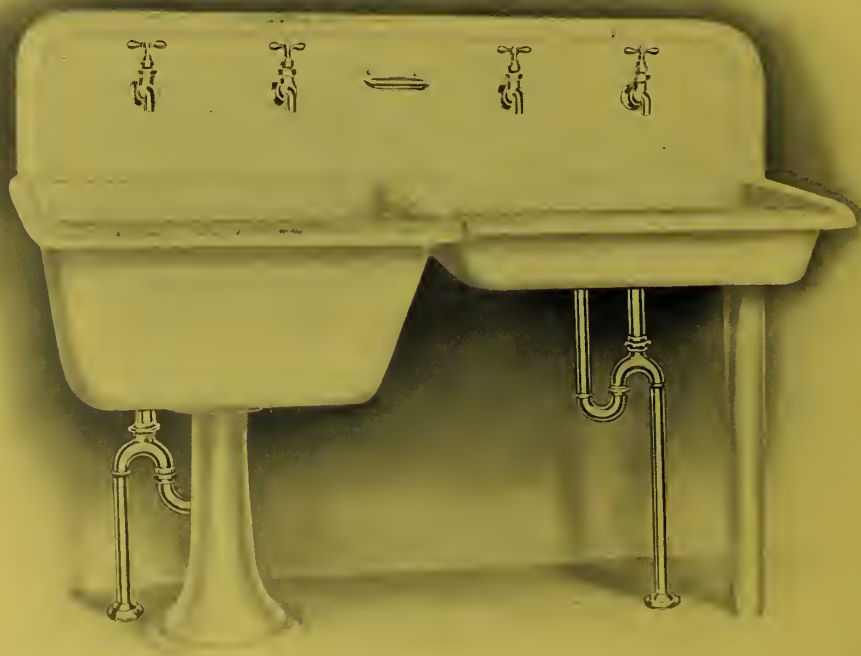


PLATE "D" 357

The above cut shows one of our latest patterns of Roll Rim Combination Laundry Tubs and Sink, with one-piece recessed back, for either left or right hand side.

This new fixture is one of our complete lines of Sinks, Baths, Lavatories, Laundry Tubs, Range Closets, etc., to which we are continually adding new patterns.

Amherst Foundry Co., Limited

General Offices and Factory: Amherst, Nova Scotia

ONTARIO:
Monarch Brass Mfg. Co.,
178 Victoria St., Toronto

MANITOBA and NORTHWEST:
E. B. Plewes,
120 Lombard St., Winnipeg

BRITISH COLUMBIA:
A. O. Campbell,
550 Beatty St., Vancouver

PLUMBER AND STEAMFITTER

The Honeywell System of Hot Water Heating

is specified by leading architects; installed by most progressive steamfitters and insisted on by discriminating builders and proprietors. This condition is the logical tribute paid to a thoroughly efficient, well reasoned system.

The Honeywell Heating Specialty Company
WABASH, IND.

Frank T. Rawley,
Canadian Manager

Room 1008 Eastern Townships Bank Bldg., Montreal.
Phone Main 4615



Malleable and Cast-iron-pipe Fittings

MANUFACTURED BY

FITTINGS LIMITED

OSHAWA

WINNIPEG

MONTREAL

Our 1911 Catalogue is now ready.

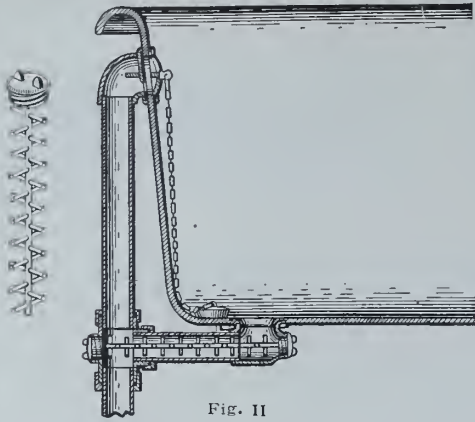


Fig. II
E.N.O. Patent Bath and Waste Overflow

SOMETHING NEW

Here is a Bath Waste and Overflow that can be thoroughly cleaned out from two outlets, viz: back of Bath or underneath. The Cleanout Rod, Fig. I, is made of aluminum, has a ball joint connection to the plug. All the fittings are of cast brass and heavily nickel plated. The whole is got up for use and will stand more abuse than any other Bath Waste in existence. Our patent can be used with any standard bath on the market.

SOLE CANADIAN MANUFACTURERS

Westport Mfg. & Plating Co., Limited
117 1/2 BANK STREET, OTTAWA



Vent or Non-Vent.

The "Rapid" Instantaneous Bath Heater

is bound to please you and your customers; not a weak point in it. Absolutely guaranteed. Not necessary to use a vent pipe. All gas valves adjustable to local gas pressures, insuring perfect combustion. We claim the "Rapid" will heat more water with less gas consumption than any other instantaneous heater on the market. Make us prove it by sending us or giving your jobber a sample order.

RAPID HEATER COMPANY
(INCORPORATED)
GRAND RAPIDS, MICH., U.S.A.

Cochran Pipe Wrenches

STRONGEST AND MOST DURABLE MADE

WARRANTED TO GIVE

50% more service
than any other
pipe wrench
on the
market.



Positive Grip
and Quick Release
Thoroughly Tested
and Guaranteed.

A 10 Day Trial will Convince.

IT BREAKS ALL RECORDS AND
SCORNS ALL COMPARISON!

Canadian Branch:

70 George Street - - OTTAWA



Just a twist of the wrist

With a CLEVELAND AUTOMATIC RATCHET and you can bore a neat, clean hole through any joist.

And do it in so much less time required by the ordinary ratchet that it will surprise you.

Order a CLEVELAND AUTOMATIC RATCHET and try it on the very next job you have.

It will pay for itself on that one job in the time saved.

And the first cost is the total expenditure, as owing to its simple construction, and the quality of material used, it cannot break or get out of order.

Write to-day for prices and further information

The McDonald Brothers Co.
CLEVELAND, - - OHIO

A NEW VALVE

JENKINS BROS.'

GUN METAL AND IRON BODY

GATE VALVES

"TYPE K"

Special Features:

Highest Quality Steam Metal. Perfect Interchangeability. Double Compensating Bronze Wedges. Metal Gland in Stuffing-Box. Great Strength of All Parts. Carefully tested to 250-lb. Water Pressure

UNRIVALLED IN DESIGN AND WORKMANSHIP

A Thoroughly Reliable Gate Valve for Steam, Water, Oil, Gas or Air. A trial will convince you that it will pay you to use these valves on all your work.

Stamped with TRADE MARK like cut.

Stocked by Machinery, Hardware and Supply Dealers throughout the World.

Catalogue and Full Particulars Cheerfully Furnished on Application.

JENKINS BROS., Limited

Head Office and Works:
102 St. Remi St., Montreal, Canada

And at
95 Queen Victoria St., London, E.C.



The "ADANAC"

is the Newest and Best Bath Cock on the Market—the Genuine Quick Opener Lever handles but NO Fuller Balls.

"Patent Pending Design Registered"

The following points are the same as contained in OUR Quick Opening Sink Cocks.

1. FIBER WASHERS ENCASED.
2. STEMS DOUBLE PITCH THREAD.
3. RAISED SEAT (same as Compression Bibbs.)
4. SPECIAL PACKINGS (same as Compression Bibbs.)



OUR GUARANTEE

"Any article of our make, proving defective through inferior metal or improper workmanship, on our part, will be cheerfully replaced with two good ones at no charge to you."

CANADIAN BRASS CO., Limited

GALT

CANADA

Books for Plumbers and Steamfitters

Books on Plumbing

Art of Lead Burning, by C. H. Fay.....	\$2 00
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Office Edition, arranged for 100 Estimates.....	1 50
Office Edition, arranged for 250 Estimates.....	2 50
Pocket Edition, arranged for 50 Estimates.....	50
Guide to Testing Plumbing.....	25
House Drainage and Sanitary Plumbing.....	50
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Practical Gas Fitting.....	1 00
Practical Gas Fitting, by Paul N. Hasluck.....	75
Practical Hints on Joint Wiping.....	25
Practical Plumbers' Work, by Paul N. Hasluck.....	75
Practical Up-to-Date Plumbing, by G. B. Clow.....	1 50
Practical Wrinkles for the Plumber, by R. M. Starbuck	1 00
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Questions and Answers on Plumbing—	
Questions and Answers on the Theory and Practice of Sanitary Plumbing, by R. M. Starbuck.....	1 00
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Furnace Heating, by W. G. Snow.....	1 75
Heating and Ventilation, by Chas. L. Hubbard.....	1 50
Heating and Ventilating Buildings, by R. C. Carpenter	4 00
Hot Water Heating, Steam and Gas Fitting, Acetylene Gas; How Generated and How Used, by Lawler and Hanchett...	2 00
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Practical Steam and Hot Water Heating, by A. G. King	3 00
Principles of Heating, by Wm. G. Snow.....	2 00
Questions and Answers on the Theory and Practice of Steam and Hot Water Heating, by R. M. Starbuck	1 00
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**Write for our descriptive catalogue
of Plumbing, Heating and Sheet
Metal Working Books**

Any of the above books will be sent postpaid on receipt of price

THE MacLEAN PUBLISHING COMPANY

Technical Book Department

143-149 UNIVERSITY AVE. : : : TORONTO, CANADA

SHE HAD TWO STRINGS TO HER BEAUX

Just like the Nye Pipe Cutter has two handles—the difference being that no girl can possibly get serious with more than one beau, while a workman with a two-handled pipe cutter can use both handles and not get serious at all, it's so easy.

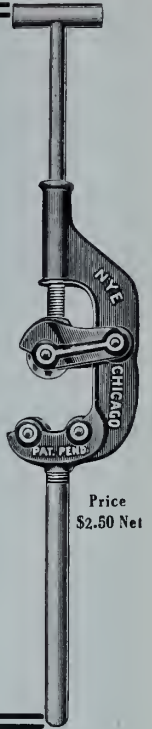
Two handles to a dipper wouldn't recommend the dipper—but two handles to a pipe cutter is a great scheme. It saves reaching around and under and over to get the other end of the single-handle. Once you used a two-handled pipe cutter you would not be bothered with the old-fashioned kind.

THE NYE PIPE CUTTER

is a fine tool, made on honor and to last a long time. The wheel is manufactured from Jessop tool steel. I could make excellent razors of the same steel—razors that would cut tough beards.

I want you to try a Nye Pipe Cutter. If you feel so disposed, drop me a postal card to that effect.

NYE, THE DIE MAN **The Nye Tool and Machine Works,** 124 N. Jefferson St., CHICAGO, ILL.



TWO CENTS PER WORD

You can talk across the continent for two cents per word with a WANT AD. in this paper.

Those Who Wish to Rent or Hire

stores or departments, sell or buy businesses or stocks, place or acquire accounts, obtain competent help, connect with satisfactory positions or secure aid in starting new enterprises, should not fail to use the Want advertisement Page of **THIS PAPER**.

WROUGHT PIPE

BLACK and GALVANIZED. SIZES, 1/8 IN. TO 4 IN.

All our pipe thoroughly inspected, tested to 600 lbs. hydraulic pressure and branded.

Ask your jobber for



Brand

CANADIAN TUBE & IRON CO., LIMITED

Montreal

Works: Lachine Canal



STEEL and RADIATION

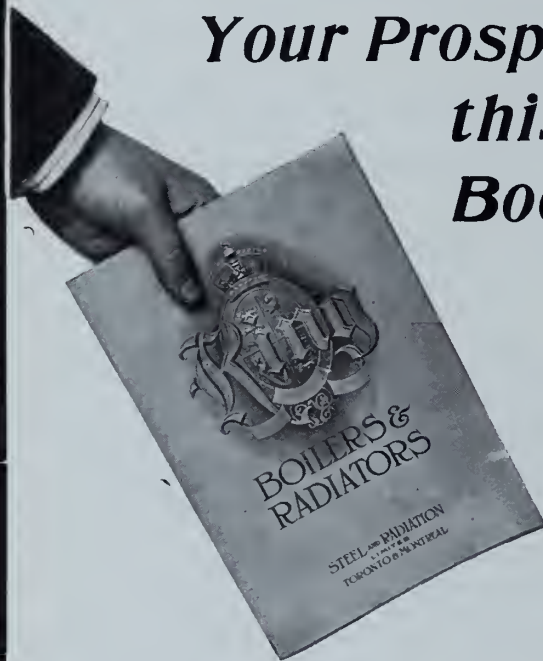
LIMITED

Manufacturers

"KING" ^{Hot Water} Boilers and "KING" Radiation



*Let us Send
Your Prospect
this
Book*



It and the attractively illustrated booklet accompanying it, "Comfortable Homes," are written to give your customer the facts he wants about heating---and, incidentally, the facts you and we want him to have.

They will lay before him and the other members of his family all the advantages of a hot water system, and present your arguments more thoroughly than can be done in a personal talk---they will work for you like Cascarets "while you sleep."

As any information of this kind given us will be treated with the utmost confidence, you need have no hesitation in asking our assistance with any business you may have in view.

Just a Word about our "Selling Helps"

Possibly you've noticed some of the 1911 series of ads. now running in the papers on "KING" Boilers and Radiators.

We'll even venture to assert that you've felt their influence a little in closing Fall business. Their presentation of the advantages of the "King" has been largely responsible for the wonderful record it is making in its first season.

The story of the ads. themselves and their auxiliaries in the form of follow-up literature---the extent of the campaign, its object and results to date, etc.,---will be graphically told in a circular we're going to send you during the next few days.

Watch your mail for it.

It will explain briefly and with photographic proof just what our Publicity Department is doing to educate architects and house-owners in the use of hot-water heating.

It will be off the press and on its way to you during the next day or two. We think you'll find it interesting reading.

STEEL AND RADIATION LIMITED

TORONTO—Showrooms: 78-80 Adelaide St. E.
Head Office: Fraser Avenue.

MONTREAL — 138 Craig St. W.

Plumber and Steamfitter

and Sanitary Engineer of Canada

Published on the 1st and 15th of
each month by
**THE MACLEAN PUBLISHING
COMPANY, LIMITED**
Subscription - - \$1.00 per year
CABLE ADDRESS:
Macpubco, Toronto. Atabek, London, Eng.

JOHN BAYNE MACLEAN, - *President*
H. T. HUNTER, - - - *Manager*
T. B. COSTAIN }
J. G. LORRIMAN } - - - *Editors*

Circulating amongst Plumbers,
Steam, Hot Water and Gas Fitters,
Sanitary Inspectors, Heating and
Ventilating Engineers, City Engineers,
Boards of Health, Architects, etc.

TORONTO, SEPTEMBER 15, 1911

THE QUESTION of the appointment of a permanent official by the executive of the Canadian Society of Sanitary and Heating Engineers may not come up for some time but it would be advisable, nevertheless, for the affiliated local associations to see that their per capita tax is paid as soon as possible. It was decided at the Convention to have the tax paid in advance and practically all the delegates present pledged that this would be done.

It would simplify matters very much at the present time if this money were paid in to the association. The officers would then feel at liberty to continue the plans laid out at the convention for better organization. It would provide the "sinews of war" and would enable the officers to accomplish a greater work than has ever yet been done.

WITH THE harvesting practically over, the "ready money" season starts. This is an opportune time to see that those outstanding accounts are collected.

FROM THE dark hole which the cave-dweller called his home to the modern day house, with its luxurious fittings, is a long step. It has taken man a long time to achieve that step. He has progressed slowly, but surely.

THE WORLD DO MOVE The evolution of the home has been very gradually brought about and the various steps, when traced back, make an interesting study. The most interesting feature of it is to observe that the improvement in public health—and, to some extent, in morals—has kept pace with the advance of modern ideas in regard to home comfort and sanitation.

The various stages of this advance were most effectively demonstrated at the International Hygiene Exhibition held this year at Dresden, Germany. A more extended notice of this truly wonderful event will be given in an early issue. Suffice it to say that the combined wisdom of the leaders of medical thought in all countries had been brought to bear in the arrangement of exhibits which proved conclusively how much health depended on environment—on home conditions, proper sewage, heating and ventilation. This was not the only lesson taught at the Exhibition. But it was one of the most important. The world has made vast strides in this respect but there is a great deal still to learn and achieve. However, as the old darkey said, "the world do move," and there is every

reason to believe that the next decade or so will see a great advance in thought and method.

THE MANUFACTURERS have asked for more room at Toronto Exhibition—more room in which to arrange displays of their product.

This request was bound to come, and is practically certain to be met by the directors. Yearly the exhibition has been growing in size, and nowhere has the expansion been greater than in the manufacturing lines. The various buildings have been crowded. An annex to the manufacturing building proper has been opened under the grand stand. In every possible way the manufacturers have sought to bring their goods to the attention of the public generally.

And now they are asking for more room. They have seen the interest the people take in inspecting their products. They realize the great educational work their exhibits accomplish. They realize that the exhibition gives them an opportunity to bring out prominently the features of their products—the points which differentiate them from similar articles—the points which make them attractive to the public.

The exhibition is becoming more and more valuable to the manufacturer, because he has come to realize more and more that he can use it to interest the retail dealer as well as the purchaser. The dealer comes to the exhibition to study the new features shown in his line. He wants new ideas, and these the displays of the various manufacturers should give him. Always they point out the salient points of their product. Sometimes they suggest how the dealer may best bring these home to his customer.

It is a great object of the manufacturer to help the retailer to successfully present his goods. It is to the dealer's interest to secure ideas which will help him to interest his customers in the various lines he handles. The exhibition gives both classes the opportunity they seek.

A WESTERN plumber, who also handles stoves, writes to ask if bags for paper-bag cookery would be a good line to handle. It all depends. If the fad has reached that section yet, quite a number could probably be sold. But from all reports the fad has not yet "caught on" to any extent in Canada.

WRITING IN the Ironmonger, "Vulcan" says: Some antiquarian lore which ought to be of interest to the members of the Institution of Heating and Ventilating Engineers has recently been unearthed. The Perkins systems of heating buildings by hot water and ovens by steam are familiar to architects throughout the civilized world, but not much is known to-day about the inventor. Perkins, it seems, was an American engineer, who came to this country some eighty or more years ago, for the purpose of trying to sell a steam gun of his invention to the British Government. The engine was a curious combination of a high-pressure steam boiler and a compressed-air chamber, and was capable, it is said, of discharging a hundred bullets a minute at a high velocity. The inventor established workshops in Regent's Square, London, but although he failed to make a success of his gun, he managed to establish himself in the more humane profession of heating engineer, and laid the foundation of a business which eventually assumed considerable dimensions, and continued to be carried on in Regent's Square until a few years ago. Perkins, if ever he re-visits the scenes of his former labors, may reflect that "peace hath her victories no less renowned than war," for his systems of heating and baking have done vastly more for the race than any triumph he could possibly have achieved in the designing of engines of destruction.

THE ORIGIN OF PERKINS SYSTEMS

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MOTOR CARS for traveling salesmen is the latest idea. We predict that the number of men seeking positions on the road would be considerably increased by this innovation.

A GREAT deal depends on the Western crops. So much depends upon it, in fact, that speculation as to the probable size is indulged in for months before the harvesting is begun. The least change of weather, threatening the crop, causes consternation from one end of the country to the other. Estimates are made on all sides. Predictions of total loss are heard at every temporary set back. The present season has had its ups and downs, its alternate periods of elation and gloom, but now all uncertainty has been swallowed up in the surety of a bounteous harvest.

WESTERN CROP SITUATION.

Wheat 178,650,000 bushels, oats 223,550,000 bushels, barley 33,300,000, flax 7,820,000 is the estimate of the grain crop of the Canadian West published this week by the Winnipeg Free Press, one of the largest daily papers in the West. For the past three weeks this journal, which has for seven years estimated the yield with a fair degree of accuracy, has had twenty-four experts touring the three central provinces, Manitoba, Saskatchewan and Alberta. These inspectors have driven 6,584 miles, and cut samples from more than 4,500 fields of growing grain. Returning to the city after their trips, meetings of the inspectors were held and the above figures were compiled. They present what is considered the most accurate information regarding prevailing conditions.

The yield is so exceptionally large that all tension is now at an end and trade in all lines is becoming phenomenally active. It means much to the men engaged in the sanitary and heating trade beyond the Great Lakes because the country will almost certainly see an augmentation of building operations and that means a busy time ahead for all trades. That the effect will be felt back

East goes without saying and it is, therefore, possible for all to join in the jubilation felt at the prosperity of the Western provinces.

NEW VICE-PRESIDENT.

The announcement is made of the appointment of T. W. Orr, of Vancouver, B.C., as Vice-President for British Columbia.

TO WAGE a successful campaign for better organization, money is needed. How about paying your per capita tax NOW?

CORRESPONDENTS sending in enquiries should see to it that the necessary information is given clearly and fully.

ALWAYS BE sure that you get your "two off." It may seem small each month, but it amounts to a considerable sum on the year's business.

OTTAWA WILL spend \$2,000 for a sanitary inspection. It will be money well spent if further epidemics are prevented thereby and precious lives saved.

IF SOME MEN adopted the profit sharing policy, it would be hard on their employees. It would be losses rather than profits that the employees of a few M.P.'s we know would share.

LOOK AFTER the coppers and the dollars will look after themselves. Likewise, look after the local associations and no difficulty will then be found in building up the provincials and the national.

"THE FELLOW around the corner from me cut \$30 under me on a \$120 job," complained a Toronto man the other day. This need not worry him at all. The other fellow will probably be out of business soon.

THE BUGABOO of damaged crops having been effectually laid for the year, the West will now proceed to enjoy the prosperous activity that the surety of a good crop entails.

WHAT HAS been done toward the formation of local and provincial associations in your districts? This question may well be directed to each provincial vice-president. It is not too early to begin work.

"PERFECT PLUMBING Promptly Put in," is the alliterative headline used on a western man's advertisement. Here are a couple of companion lines that he might use: Heating Hastily Handled and Supreme Sanitary Satisfaction Supplied.

APROPOS OF Fred Stork's recent European tour, mention of which will be found in another column, it is said that, when he was in Fernie, the only competitor he had was a man of the name of Quail. The bank that both did business with was managed by a man boasting of the name of Bird.



A new view of the Canadian National Exhibition grounds, taken especially for Plumber and Steamfitter.

Big Exposition Again Surpasses Itself

Canadian National Nearly Reached a Million in Attendance—Many Additions Contemplated for Next Year—Manufacturers Want More Space — National Scope of Exhibition Again Well Illustrated—Many Attractive Plumbing Displays.

Staff Correspondence.

Toronto, Sept. 14.—With an increase of more than 87,000 over last year, and a total attendance of 926,500, the Canadian National Exhibition of 1911 has passed into history. These figures would have been greatly exceeded, had the weather been on its best behavior during the two weeks the exhibition was open.

The Canadian National Exhibition is known all over the world; it is probably the greatest annual exhibition held anywhere.

Paved Streets Appreciated.

Many improvements have been made since 1910, among the most important of which were paved streets—a great convenience to the thousands who attended, and more particularly to those who were present on the two or three rainy days experienced. One of the important additions to the exhibition grounds' scenery was the Goodenham Fountain, standing among the Manufacturers', the Administration and the Horticultural Buildings.

This was admired by all eyes. A large new building was also erected, known as the Manufacturers' Annex and the Women's Building. Of course, everyone knows that the location of the grounds is ideal, being pleasantly situated on one of the most beautiful sections of the northern shore of Lake Ontario.

Its National Scope.

Probably the greatest feature in connection with the Canadian National Exhibition is its national scope. This was particularly evidenced in the Manufacturers' and Industrial Buildings, where goods sold all over Canada were exhibited; and in the Horticultural and Railway Buildings where products from the farm and garden from every province of the Dominion were shown. British Columbia was there in miniature with its splendid display of fruit; Alberta, Saskatchewan and Manitoba, with their wheat and other grains; Ontario and Quebec, with the products of their farms

gardens and mines, and the provinces down-by-the-Sea also sent their exhibits and people to complete the national importance of this great annual event. Public spirited citizens have good reason to be proud of the splendid culmination of the exhibition.

For next year, many improvements are already talked of. Manufacturers want more room and they will likely get it. With the expansion of the Exhibition more restaurants are needed; there should be more attention given to aquatic sports, and there will no doubt be more permanent pavements. A new police station, a new fire hall, and a building for provincial exhibits are being talked of, but probably the greatest change will be found in a new eastern entrance, with electric cars running into the grounds. The directors are working with a view to improving everything needed, and there is every reason to anticipate a great future for this exposition.

PLUMBER AND STEAMFITTER

STANDARD IDEAL COMPANY.

Again the solid, sanitary, beautiful articles of bathroom furniture exhibited by the Standard Ideal Company, of Port Hope, attracted many architects, master plumbers, and prospective builders to the particular part of the Process Building where the company has its permanent stand. This stand has been improved this year. The ceiling is considerably higher now, and its deep cornice gives a more substantial appearance to the big booth. The background

holders, and those who purpose to become householders, see what a bathroom should be. They can inspect the various lines. And they are sure to find amid the varied display, some fittings which would be suitable in their home or in the home they intend to build. Moreover, the passers-by become familiar with the brand. They know what goods to ask for when they place an order with the master plumber.

This year, as last, the central feature of the Standard Ideal display was the

Other features of the "Alexandria" display were the sets of baths with bidet attachments, childrens' pedestal baths, manicure tables—some of these being hand decorated.

"Alexandria" fixtures are superior to porcelain and command a higher price. It is right that they should, for their production was made possible only by the expenditure of enormous sums. The drawings and the master patterns required the investment of thousands, and some of the fixtures necessitated great



Splendid Display of the Standard Ideal Co.

has been artistically paneled in fumed oak, with backgrounds of blue and brass trimmings. Upon this the "White Wear" shows as it would in an up-to-date bathroom.

The display almost causes some of the passers by to break the tenth Commandment. It makes them covet such fittings as are there displayed for their own bathrooms, and it makes those fortunate enough to possess the means determine that they will install such equipment.

The educational effect of this exhibit is one of its great features. House-

"Alexandria" line of porcelain enameled ware. Space forbade the equipment of such bathrooms de lux as are on exhibition in the company's beautiful showrooms on King street, but numbers of "Alexandria" baths, lavatories and other fixtures were shown.

Among the many designs were some which are comparatively new, and which are not yet thoroughly understood even by all in the trade. One of these was the double basin lavatory, constructed for use where both hard and soft water is available.

outlays before the makers were satisfied that they had the very best product.

It has been the aim of the Standard Ideal Co. to produce on Canadian soil the highest quality of bathroom equipment known, so that people would find it unnecessary to import from foreign countries. The exhibit proved conclusively that the aim has been attained, and that as well as supplying the highest quality of goods that can be desired the company can also meet the demand for a good but reasonable priced fixture.

CANADA METAL CO.'S FINE EXHIBIT.

W. G. Harris, general manager of the Canada Metal Company, along with a number of the company's representatives, was busy welcoming the outside dealers

It is the ideal metal for general machine bearings, and is greatly liked by the trade, since it is of that class of goods which brings repeat orders.

Other lines of metal shown were "Imperial Genuine," used especially for

Heavy lines of ignot metals—such as pig iron, copper, tin, lead and spelter—were also displayed, to the advantage of some who had not previously been acquainted with the quality of metals carried by the Canada Company



CANADIAN NATIONAL EXHIBITION —Canada Metal Co.'s fine exhibit.

who visited their fine exhibit arranged in Machinery Hall. Brightly lighted up as the booth was, the different lines manufactured were finely displayed. Of especial interest to the hardware merchants was the special babbitt, "Harris Heavy Pressure," which is always sold through the hardwareman.

main engine bearings and heavy work, and "Imperial Tough," especially made for gasoline and marine engines.

The display of solder, in bar, wire, drop and block, was also large. The company makes this line in any shape and quality desired.

Since the last exhibition this concern has moved into its new factory on Fraser avenue. This was built especially for the company's use, and its ample space and fine arrangement enables work to be turned out so rapidly that orders can be promptly filled.

Specializes on Septic Tank Construction

Peterboro' Man Has Acquired Extensive Knowledge of Problems of Sewage Disposal and Water Supply—R. G. Sturgeon & Co. Have Moved into new Premises—Description of Showroom.

THE present being an age of specialists, it pays a man, in the sanitary or any other trade, to specialize on some one line. The success of R. G. Sturgeon & Co., Peterboro, is due in some degree to the fact that Mr. Sturgeon himself is an expert on septic tank construction and water systems. He has given much time to perfecting his knowledge and experience in that phase of sanitation and has done a great deal of work along that line.

R. G. Sturgeon & Co., recently moved to a commodious and well arranged showrooms at 202 Charlotte street. A view of the same is reproduced, showing the front of the premises and giving, at the same time, a good view of the interior of the shop. The closet in the centre of the shop (as shown in the picture) and the one in the rear left hand corner are B.O.T. outfits. The one

in the corner is of the centre push variety, while the one in the centre of the picture is of the lever handle type. In the rear right hand corner, a thirty-gallon water boiler is shown. It is connected to a small stove and also to a gas water heater, thus making it possible to give practical demonstrations. At the left of the picture is shown a very complete bath, equipped with overhead Robertson shower, and shampooing and other attachments. Ideal baths, lavatories and sinks are shown. Two Beaver board hangers are shown in the rear of the establishment.

The new establishment presents a very neat appearance and the facilities for displaying goods thus afforded has materially assisted the company in widening the scope of their business.

Mr. Sturgeon was born in Owen Sound and learned his trade in Toronto. He

was apprenticed there in 1887 and, after becoming a qualified journeyman, he traveled for five years in all parts of the United States, in search of added experience. As a result of his "post graduate" apprenticeship, he became thoroughly versed in the finer points of the trade and had an opportunity to study work on the widest scale. He thus had an opportunity to "get his hand in" on elaborate and intricate jobs, his masterpiece in this respect being the installation of a \$15,000 bathroom in the home of a wealthy citizen of Philadelphia.

As stated before, Mr. Sturgeon was not content to limit his knowledge to plumbing and heating work in the commonly accepted sense. He took steps to secure a thorough knowledge of the problems of sewage and to-day specializes on sedimentation tank construction



A View of the New Showroom of R. G. Sturgeon & Co., Peterboro—A Picture of Mr. Sturgeon is Shown in the Lower Right Hand Corner.

—the only system of sewage disposal by bacteria. He is also a specialist on water supply systems for towns and villages and on vacuum heating and ventilation. By means of his experience in these lines and in septic tank work, he



The Youngest Plumber in Canada—Keir Sturgeon Completing a Joint.

comes in contact with the residents of the rural sections, and is getting a better share of their custom than is accorded to most members of the sanitary trade.

Plumber Runs on Labor Ticket

TORONTO, Sept. 12.—The Labor party has placed a candidate in the field in East Toronto in the person of James Richards, a plumber with Prince & Co., 550 Bloor street West. Mr. Richards is one of the ablest exponents of the cause of Labor in the city and it is believed that he will make a creditable run. However, even his strongest supporters recognize that he has undertaken a task which appears almost impossible. East Toronto is one of the safest Conservative ridings in the Dominion. Majorities in this constituency generally creep up into three figures. At time of writing, the only other candidates in the field are A. E. Kemp, Conservative nominee, and Jos. Russell, Independent Conservative. The adherents of the Labor candidate base their hopes on the possibility of arousing the laboring men sufficiently to poll a substantial vote. In such a case, it might be possible, with two men of the same political faith in the field, to slip in between and come home with the honors.

Certainly the candidate himself is not neglecting any opportunity to improve his chances. He is working hard—when time allows. It is his intention to con-

tinue working at his trade right through the campaign and devote his evenings to electioneering. So it will be seen that he is laboring under difficulties; for the riding is a large one and every minute of the day would not be too much to cover the ground with any degree of thoroughness. Nothing daunted by this, Mr. Richards is going ahead with cheerfulness and indominate perseverance. He has good platform ability and a pleasing manner.

When seen recently by a representa-

tive of Plumber and Steamfitter, Mr. Richards chatted about the campaign, his own work and also about trade topics. He is interested in everything that pertains to the advancement of the sanitary trade, as well as the general improvement of labor conditions. Some of the planks in his platform are:

A Workmen's Compensation Act.

Eight-hour day.

Universal suffrage.

Abolition of Government patronage.

Extension of the time of polling.

An Immense Central Heating Plant

TORONTO, Sept. 13.—Yesterday saw the practical completion of the installation of the largest central heating and lighting plant in Canada, when the scales and coal-hawkers were put in place at the new furnaces of the University of Toronto. This plant will light and heat every building connected with the University from College street to Bloor street west of the Parliament buildings, besides Victoria University and the new School of Domestic Science, which are a little to the east of that line. Formerly many of these buildings were heated and lighted in pairs, and many had their individual plants. The new scheme is calculated to save power and fuel, as well as labor, and the annual saving will, it is expected, be nearly \$30,000.

Superintendent C. G. Campbell of the University, stated that the new central plant is not only the largest ever installed in a Canadian university, but is undoubtedly the most gigantic affair of its kind in the Dominion.

It comprises four huge furnaces of 400 horsepower each, and dynamos generating about 750 kilowatts of electricity. Tenders have been called for 4,000 tons of coal, although the amount of fuel that will be consumed will depend entirely upon the severity of the winter. The coldest days will require twenty tons, it is expected.

The saving in wages alone is estimated at between \$8,000 and \$9,000 a year. Instead of a host of engineers, firemen and helpers, the ordinary staff will now consist of about six men.

About a dozen firms, composed of an equal number of American and Canadian companies, have brought the work to a successful completion. The engineers in charge have been New York men, while all the steampiping and the installation of switchboards, etc., has been done by local concerns.

The new plant has stood a successful test, and will be in full working order next week.

WENT TO WATERLOO.

Preston, Ont.—Among the expedients adopted by Bernhardt & Gies to promote a spirit of loyalty among the large staff of their hardware and plumbing establishment, the annual picnic has proven to be one of the most successful. This year, the picnic was held at West Side Park, Waterloo. A most enjoyable time was had in games, races and other amusements. In the football game, married men vs. single men, the former proved themselves to be genuine kickers, but, in the baseball game, the single men had their revenge, winning by 13 to 10.

Bernhardt & Gies entered a baseball team in the Manufacturers' League this season, and are now leading the league. Mr. Bernhardt himself is a baseball star.

General Buildings.

The Union Bank of Canada will build at the corner of Yonge Street and Sherwood Avenue. Plans are being prepared.

The John Palmer Co. are contemplating the erection of a \$25,000 larrigan factory at Fredericton, N.B.

O. Tremblay is building stores and dwellings on Centre Street, Montreal, to the value of \$7,500.

The Tacoma Match Co., of Tacoma, Wash., will build a \$25,000 factory at New Westminster, B.C.

The erection of a cold storage plant at Niagara is planned.

F. H. Bairne, Revelstoke, B.C., is to build a \$20,000 warehouse. Tenders are being called.

The National Cash Register Co. are contemplating the erection of a factory at Toronto, on Christie Street.

A \$300,000 hotel is to be built at the corner of Pender and Vernon Streets, Vancouver.



The Question Box



Subscribers are Urged to Send Questions to be Answered, or to Comment on Letters Published. Descriptions of Jobs Done or Shop Kinks are Also Invited.

WOULD THE PIPE POCKET AIR?

Editor Plumber and Steamfitter.—In a drawing given in the issue of the paper for August 1st, 1911, do you not think that the pipe as shown in Fig. 2 would stand a good chance to pocket air at the point numbered "1" in the drawing?

John Carson.

It might be well, as has been suggested by a correspondent, in case the tank

The chances are that the fitter has "bushed" the opening in the boiler to get it down to the size of the connecting end of the thermometer. It may be "bushed" two or three times and in such a case the water in the boiler would hardly touch the thermometer. Undoubtedly that is where the fault is.—D.C.H.

large enough, which it probably would be, until all four tenants got to turning on the hot water at the same time.—D.C.H.

SEND IN PROBLEMS.

The "Question Box" is one of the most valuable features in Plumber and Steamfitter. It can be rendered still more useful if subscribers will send in problems, which they desired solved, or which they have themselves solved. The editor of this department is always willing to give any information that may be desired or to lend his assistance in finding a solution for any knotty trade problem. If possible send in drawings with each problem submitted.

WHAT SIZE IS THE MAIN?

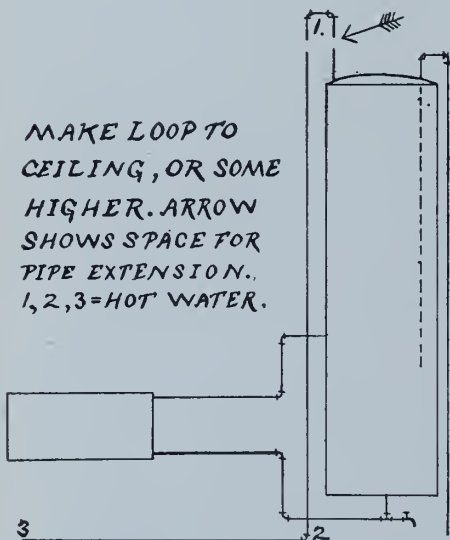
Editor Plumber and Steamfitter.—I would like to ask what are the sizes of pipe (the circulating main and the risers to fixtures) in the drawing given as Fig. 2, in paper of Aug. 15, 1911. How much larger should the main be, than the rising pipes?

C. Johnson.

No sizes were marked on the plan and so we gave none. We can say that the area of the main should equal the combined area of the four branches that run to the fixtures, if perfect satisfaction is desired in case there is a constant demand for the hot water from all parties.

In case the four pipes shown were $\frac{3}{4}$ in. in size, their combined area would be 1.7668.

The size of the pipe which comes near-



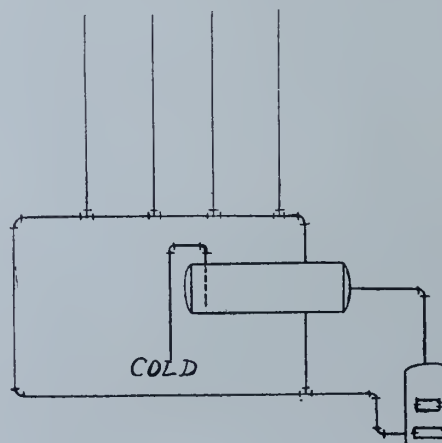
pressure was continued, to run a pipe to the attic, from point "1" to act as a vent. However, if any pipe was taken off to any of the fixtures, from point "1" it would answer. If it was a city pressure job, the pipe would clear itself.—D.C.H.

THERMOMETER GONE WRONG.

Editor Plumber and Steamfitter.—In testing out a hot water job recently, I put a thermometer in a pail of water that I drew from a radiator and found, to my great surprise, that the water at the radiator was some ten degrees hotter than it showed by the thermometer on the boiler. How do you account for this, as I am sure that both thermometers were correct, having tested them?

Calgary, Sept. 11. W.A.C.

Look to the manner in which the thermometer is connected on the boiler.



est to this amount is one and one-half, which has an area of 1.767.

Some plumbers might run the main one and one-quarter in size thinking it

BUILDING NOTES.

A new fire hall, to cost \$20,000, is to be built at Winnipeg.

A wing is being added to the General Hospital at Vancouver.

The Dominion Sugar Co., will establish a beet factory at Chatham, Ont.

Ritchie & Ramsay, Toronto, are contemplating an addition to their plant.

The B.C. Telephone Co., will erect a telephone exchange building at Kamloops, B.C.

An addition to the plant of the Otis-Fensom Elevator Co., at Hamilton, Ont., is contemplated.

A land titles office is to be built at Dauphin, Man., by the Manitoba Provincial Government.

A factory, for the manufacture of soap polishes and German chemicals, is to be built at Berlin, Ont.

The Monarch Knitting Co., St. Thomas, Ont., are contemplating an addition to their factory, to cost \$60,000.

A whitewear company, with a capitalization of \$40,000, and an electrical company, capitalized at \$100,000 may establish plants at Listowel, Ont.

The World Do Move: Advances in Sanitation

An Address by W. W. Hughes, Minneapolis, Presented at the 29th Annual National Convention of Master Plumbers of America.

THE quaint old darkey who is credited with having originated his bit of philosophy embraced a whole volume of literature in these four short words.

Most certainly the world moves. Its strides are tremendous; but you and I, who are part and parcel of the moving, neither see nor feel it with sufficient distinctiveness to make it impressive. We would have to take a Rip Van Winkle nap of thirty, twenty, or even ten years, in order that we might be duly impressed with the magnitude of the changes which are taking place every day. And the changes are for the better and not for the worse. Indeed, one of our leading politicians is credited with having said very recently that even politics is better than it was; that if men would do the things to-day that they did twenty years ago they would be indicted and committed to the penitentiary.

That reminds me of the fact that a few short months ago the authorities of this state issued a pardon to a man who had been confined in the Minnesota state prison for thirty years. During the more recent years of his imprisonment he had been given charge of the prison gardens and lawns, and his ability along these lines was something wonderful. Within the confines of his prison he has successfully raised oranges and lemons, tropical plants and flowers, and, like Luther Burbank, had grown new and startling combinations of fruits and vegetables.

Previous to his imprisonment he had led a roving life, had followed the sea and visited all the countries on the globe, and in the prison he had acquired the name, "Sinbad, the Sailor," and by this name was known to one and all. But remember, now, this poor old man, this "Sinbad, the Sailor," had been in prison for thirty years, was bound in by four stone walls, with the heavens above—that was his world. And then the doors were opened. He was once more a free man—free to come and go anywhere and everywhere, and as such he walked out of the gates. And, behold, he was a stranger in a strange land.

Changes in a Generation.

In the little Town of Stillwater he saw for the first time the horseless carriage, the automobile of many shapes and sizes, running to and fro with the luxurious ease, almost noiseless. He was amazed. And as he traveled down the street he saw for the first time an elec-

tric street car, and a large splendid car, apparently moving without effort; and his bewilderment was greater than ever. He entered one of these magnificent cars (the Twin Cities have the finest street cars in the world) and was whisked away over hills and dale to the twin cities of Minneapolis and St. Paul, and his amazement was greater than ever. He was in a city of paved streets, hurrying humanity, street cars, skyscrapers, motor cycles and automobiles, and remember this, you and I: the bicycle had come and gone during his imprisonment.

He was dumbfounded; he was lost. Never had he been so lost at sea as he now was in the midst of these two great cities. He was without a doubt a man without a country. He tried work of several kinds; but he could not accustom himself to the new conditions; and, finally, after several months of freedom, poor old "Sinbad, the Sailor" knocked at the gates of the prison, begged for admission, and it was granted him. And to-day, if you go to Stillwater, you will find him among the flowers and plants he loves so well; or you may find him driving about the town on errands for the prison, for he is a "trustee." He wears no uniform; but his only home is a prison.

Suppose that he were not "Sinbad, the Sailor," but "Fuller Ball, the Ex-Plumber," and figure out the changes he would find, were he to return to the craft of his calling after an absence of thirty years, twenty years, yes, even ten years. To say that he would be amazed would be putting it mildly. He would not know what to make of our modern iron pipe plumbers. He would search in vain for the old-time pan closets, the short hopper closets, the lead safe wastes, the symmetrical lines of lead water supply pipes with the fancy hearts over the zinc, the wainscoting around the kitchen sinks and the bath tub, wash bowl and closet, the old copper-lined bath tub, whose making required the best efforts of a host of copersmiths; and he would declare most emphatically that the country was going to the bow-wows; that there was no chance for an honest mechanic to make a living; and you and I would wonder at his narrowness and prejudice.

Still, that is just what happened in the gathering and harvesting of grain. The laboring men all declared that the advent of new and improved machinery would deprive them of their livelihood.

Nevertheless, the world goes on; there is work for all. New conditions make new work, but it all tends toward an ideal. And so it is with plumbing: we are changing and improving, and working towards the ideal in sanitation.

The Passing of Marble.

I have only been connected with the plumbing business for about ten years, but even at that I can see the wondrous changes that are taking place in our trade. I remember how my old boss used to go to the supply house and pick out marble lavatories; and loud and numerous were his boasts as to his ability to pick out good marble. Then the enamel iron lavatory made its advent, but the old boss still fought for the marble, and insisted time after time that the marble would come back some day stronger than ever. And when finally the marble ware took the count, he availed himself of the low prices offered by one of the local jobbers who had seen the light, and wished to unload, and he purchased the entire lot. Mr. Boss Plumber has most of that marble in his shop to-day occupying valuable space, waiting for the day of its revival—which will never come. And to-day the porcelain lavatory is endeavoring to displace the enameled one, and it may succeed.

Do you remember the old orders for stock which you used to give the salesman when he called on you? There were soldering unions and nipples, trap screws, basin and hopper clamps, rod couplings, street washers and thus on, without end; and that stuff is all junk to-day. In fact, the plumbers of the new school do not know what are the uses of most of the material enumerated above.

Consider for a moment the closets of yesterday and to-day—the old-time short hoppers, the high iron tanks, the antique valves that were forever leaking, the front wash-out bowl, the wash-down, the syphon jet, and finally our friend Tilden's bowls, our perfected low tanks, with almost noiseless, leakless valves, and the flushometer closets of various makes and patterns. The high tank made a game fight to keep in the running, but it had to make way for the low (thanks to Messrs. Wolff and Douglass). The low wood tank will undoubtedly give way to the porcelain, cast iron, cast steel, composition or something newer yet; and these in turn will be superseded by some style of flush-

ometer bowl and seat made integral.

I recall how one of our manufacturers attempted to anticipate the change from wood to porcelain, and announced to all the world that he was through making wood tanks, and that the porcelain tanks was his one and only bet. But he crowed too soon, and after a disastrous season he got back into the wood tank line.

Another of the large manufacturers has tried for years to induce people to purchase iron enameled closet bowls, but has found he was on the wrong track, and is now selling a line of porcelain, which plainly shows that the right material will prevail in the end.

The basis of all practical examinations for both master and journeyman plumbers is the wiped joint—a relic of the fast fleeing past. We can recall the joy with which we greeted the old-time lead burners; but now we witness the spectacle of common ordinary wire pullers wiping joints of all kinds in manholes under-ground, and on swaying wires overhead, and all for a paltry forty dollars per month. Ye gods! What is this world coming to?

The Wiped Joint is Passe.

It is coming to a realization of the fact that the wiped joint is passe; and already my own men are installing plumbing in ordinary dwellings where the fixtures consist of a closet, bath, lavatory, sink and laundry (and they are doing it in a manner which cannot be excelled), and in the whole job there are only six wiped joints; and right now I am considering the elimination of two of them. The others I hate to part with, as I cannot see anything good in anything except lead pipe for the horizontal wastes under bathroom floors, although it is a fact that there are buildings erected to-day—notably, the skyscrapers—in which hundreds of fixtures are installed with never a wiped joint.

Years after years we have worked like thunderation wiping four-inch lead bends to ferrules, and it is only recently that one of our Minneapolis jobbers put out a ferrule of sufficient size to admit of the lead bend being run through the ferrule without first dressing the bend. And, again, we can purchase bends with one end closed, ready for testing, or corrugated bends to allow for the necessary expansion and contraction in a building.

I insist that the master plumbers should know better what they want than do the manufacturers, and such being the case, we should ask for what we want, and insist on getting it. It may take time; but sooner or later some fellow will come along who will make what you want. For instance, we use a combination faucet for hot and cold

water on bath tubs, and separate faucets on the lavatories. Why? Simply because the manufacturers started to make them that way, and we have neglected to tell them that they were wrong—wrong in this way: that ordinarily the lavatory is used from ten to twenty times as often as the bath tub.

The only real necessity for a combination faucet on the bath tub is to provide a ready attachment for the shower, which is used on about one tub in a thousand; whereas, there is nothing so convenient or so sanitary as to use running water when using the lavatory; and unless a combination faucet is provided we are up against the proposition of washing in ice cold water on one side and scalding hot water on the other, and for the reason that I do like to wash in running water, I very much favor a combination faucet for the lavatory, but find that it is almost impossible to secure such a fixture at a medium price.

The Small Savings.

Another thing: Most plumbers use a two-part laundry tray, with a Siamese waste connection, and an ordinary lead trap, necessitating the dressing and wiping of about a foot of lead pipe. We, however, purchase a trap made especially for us, which measures 25 inches from the centre to the end, wipe it onto a solder union, and it is ready to install. It costs the same as the lead pipe and the trap together, but saves the cost of the solder and the time necessary to wipe one joint. On one job this would be a small matter, but on a 100 or 200 it amounts to a whole lot of money.

The tools of the trade are undergoing a great change. We now have our easy cutting adjustable stock and dies, our saw-tooth pipe cutters, our ratchet reamers, and other new and improved tools without number. Did you ever put an old-time die stock on the end of a piece of two-inch pipe, and sweat like a Turk trying to make it catch, and finally call upon the bookkeeper, the teamster, and the shop boy, together with a piece of plank, to make the blamed thing catch? Of course, you have—not once, but many times. Your old boss was probably one of the kind that would say, "Well, I bought those dies about six months ago, and they ought to be good." Are you that kind of boss to-day? If you are, get out of the rut and be a live wire! There are tools on the market to-day with which my lad of fifteen can cut two-inch threads alone, and not work very hard, either.

We also note the many new fittings designed to save labor. For instance, in our town sinks were first used with lead traps, the vent wiped into the

crown of the trap, and the entire sink encased in wood, with a door on the lower part so that it could be used for the storage of pots and pans. They looked all right in 1890; it is the white enameled roll rim sink and back east integral, with nickel-plated faucets and traps that has the call. Likewise, everything in the plumbing line is undergoing a gradual change—a change for the better and a lower cost than ever before.

Verily, the plumber is doing a good work for mankind.

The continuous waste and vent system is coming into general use, to the exclusion of the old; and while it is a great improvement over the old, still I look for the elimination of a whole lot of venting as practised to-day.

Practice and Theory.

Just the other day a salesman was boasting to me of some of the new patterns of gas stoves now being manufactured by his concern, and remarked that he knew his line was right, because the old man (referring to his boss) had been a practical stove man for forty years, and the old man's son was now a graduate gas engineer; and between the two they would surely make good. Good argument, isn't it? Nevertheless, in our town electricity is superseding gas. We have done work in a number of houses in which no gas piping has been run except to the stove openings.

The makers of electric appliances are certainly up and doing. The mails are full of their circulars; and if there is anything under the sun which is not now operated by electricity, you may rest assured that some genius is working towards its solution, and that it will soon be with us. I would suggest that, if our manufacturing friends has no younger son available, it would be advisable to rush grandson through an electrical course in some one of our colleges, and that without delay.

It would take a good many sheets of paper on which to describe or even enumerate the various electric contrivances in use to-day. Why, I remember—and so do you—how, when we needed half soles on our shoes, we took them to the little old cobbler around the corner, and carefully and earnestly he fitted a pair of soles to that old pair of shoes, and nailed and sewed and rubbed and scraped and finally marked on one of the soles his mystic sign, meaning one dollar due, and turned them bottom side up in the window, that passersby might examine his work. But now the cobbler has a rival. It is the electric shoe repairing machine, and it will do the job from beginning to end at one-half the cost of the old, and better, too.

Forward Steps.

So it is with plumbing. In our own shop we use electric lights, have an electric fan and electrically-driven pipe-threading machine. And on a recent remodeling job in a large concrete and steel building, we moved our electric machine right onto the job and cut the pipe in jig time. We also made all of the holes through the steel and concrete with an electric drill, and thereby saved a good many dollars.

We are approaching the time when the master plumber will be a merchant, as well as mechanic; and, like the financier of to-day, he will realize that it will be necessary to do a large volume of work at a small percentage, but by judicious attention to the details he will be enabled to make more money and at the same time assist in recovering the plumbing business from the job-smiths of the would-be comic papers.

We must read everything pertaining to the business, and I would suggest that the magazine business "System" be subscribed to and read carefully from cover to cover each and every month of the year. It is chuck full of nuggets of wisdom, and worthy of any man's time and attention.

To succeed we must be up and doing. We must absorb new ideas from our competitors, and from the successful men in other lines. We must adopt the automobiles in our business for the collector, the estimator, the foreman, the delivery of material, the moving of our men and material from one job to another. We must think out weeks in advance, and purchase material that will fit the need of the job conveniently. In other words: Like our baseball teams, we must plan the game together, forget the one-man; remember that it takes nine men to make a complete team, and they must all hit the ball. We must co-operate with our men. Have the bunch in to supper some evening, and talk things over when belts are tight and the cigars are smoking right, and you will learn a whole lot of things that you never knew before. The big fellows do it in other lines, why not the plumbers?

Co-operate with your men by giving them up-to-date tools, by paying them their worth regardless of the scales, by having the right stuff on the job at the right time, and also bear in mind the old saw that "You can catch more flies with sugar than you can with vinegar."

Cheap material generally means dear labor. Get a typewriter, and learn to use it. Keep your office in a business-like manner and bear in mind that the problem of perpetual motion has not been solved, after starting your ball rolling it will need regular systematic

assistance from the man higher up, or it will stop, as did the wonderful One Hoss Shay, which

"Was built in such a wonderful way.

It ran a hundred years to a day,

How it went to pieces all at once,

All at once, and nothing first,

Just as bubbles do when they burst."

The Devil's Lane.

In a recent speech at Minneapolis, Hon. Frank Nye, our able representative at Washington, recited the tale of two of his old neighbors, who disagreed as to the boundary line between their two farms, there being a difference of sixteen feet for about a half mile, and, accordingly they fenced this tract off by itself, and it became a highway and was known far and near as the Devil's Lane.

In a like manner we have our own Devil's Lanes between our own business and our competitors'. New shops are usually the offspring of older shops and are presided over by former bookkeepers, foremen or mechanics. Why not meet those fellows halfway, show them that it costs money to do business, and give them some of the benefits of our experience and we will be amply repaid for divulging our so-called secrets. If we each contribute a little, we will all prosper under the banner of reciprocity, and instead of watching in timid wonder the progress in our line, let us take the initiative, and include ourselves in the statement, "The World do Move."

GUELPH MEN MAKE MERRY.

Guelph, Sept. 1.—The plumbers of the city, together with their wives and families, went to Puslinch Lake yesterday and held a picnic. The day was ideal, and it was a merry time they spent, what with games, races and telling "pipe" dreams about their "charges."

About 80 sat down to tea in the evening, so that it can be seen at a glance that Guelph has a few plumbers. Some of those nursing injuries to-day are: A. Malcolm, broken up all round; G. Grinyer, sprained finger and stiff in knees; I. Doughty, ankle hurt while running bases; Fred Smith, sore feet from jumping so hard; R. Mahoney, sprained finger and injury to foot. Ald. Mahoney sustained no injuries as he is hardened from his experience with the city council.

The races resulted as follows:—

Boys' race, under 14, 50 yards—Harold Dixon, Norman Malcolm.

Helper's race—P. Sarles, Joe McKenna.

Quoit match, two men team—Messrs. Barron and Howarth.

Baseball match—Master plumbers 12, journeymen 10.

The master plumbers came in strong in the third innings and scored 10 runs.

Running jump—Fred Smith.

Hop, step and jump—P. Sarles.

Master Plumbers' race, 100 yds.—T. Doughty, H. Mahoney.

Journeymen race, 100 yards—H. Jeans, E. Billings.

Married ladies' race, 50 yards—Mrs. Anderson, Mrs. Billings.

Young ladies' race 50 yards—Miss Barron, Miss Smith.

Girls' race, under 14 years, 50 yards—Gertrude Goodwin.

NOBLE & RICH PICNIC.

London, Sept. 5.—Despite the rainy weather on Saturday afternoon the firm of Noble & Rich, and their employes and friends, held their annual picnic at Springbank Park.

Owing to the rain which came up at two o'clock the picnickers did not reach the grounds until after three p.m., and the sports were postponed until after three o'clock, but as soon as possible they were started. According to the programme a baseball game was the first item. Sides were chosen with Ben Noble and E. B. Wilkinson as captains.

Talk about your league ball. It was not in it with the fast game which was put up by the Knights of the Grip and the Sanitary Engineers. The only fault that could be found at all was in the decisions passed by the umpire, and "Kill the umpire," was an oft-repeated threat.

However, the result was something about 17 to 10 in favor of Ben Noble's side.

After supper, which was served at five o'clock, the games were run off, and the way Bert McLaren, of the Canada Brass Co., of Galt, beat Charlie Bakemeyer, of the Wolverine Brass Co., of Chatham, was a sight not often witnessed, on a 100-yard dash for fat men.

The games run off were:—Journeymen's 100 yards; apprentice, 100 yards; fat men's race; ladies' race; throwing ball contest, for the ladies; smoking race; hop, step and jump; long jump; high kick; standing jump. After this was done, the prizes were distributed to the winners.

Then, as there was some ice cream and lemonade left, all gathered around the freezer and filled up before starting for home. The return trip was made at 7.30.

A public school building is to be erected at Barons, Alta.

An addition is to be built to the Collegiate Institute, at Clinton, Ont.

A \$10,000 separate school is to be built at Dorval, Que.

The Methodist Church, at Lennoxville, Que., are contemplating the erection of a \$15,000 edifice.

New Lighting Fixtures Like Those of By-Gone Days

Crystal Pendants Again Become Popular for Drawing-room Chandeliers—A Brass Torch for Hall Illumination Resembles Lights of Years Ago—Mission Styles Popular for Dens—Many New Patterns From Which Dealers May Make Selections.

"The moving finger writes, and having writ, moves on." So sang the old poet. But he thought not of lighting fixtures, for with regard to them the moving finger moves in circles, the designs which are in especial demand this fall being reversions to styles of by-gone days.

Everywhere this is evident. Time was when chandeliers with crystal pendants were considered the only proper fitting for the drawing-room. That style went out, but now it is returning, some beautiful chandeliers being ornamented with these crystal pendants, which, cut as

formed glass globe, a torch it appears, throwing off light from a large brass bowl supported by three strong brass chains. If a clear globe is used a strong light is given, but softer effects may be secured by using colored globes.

For living rooms and libraries the mission fittings are becoming more and more popular. Mission fittings are new, of course, yet they, too, have been inspired by the simple styles of other days.

More modern are the art nouveau shower designs, for which there is a strong demand. In these fittings, bell-

ed. It differs widely from the colonial patterns, which while absolutely good, are plain, almost severe.

From all the new designs the dealers should be able to select some fine samples to show their customers—samples so varied that they would enable the selection of fittings for rooms of all sizes and of all furnishing effects.



Brass chandelier with crystal pendants, suitable for drawing-room.
(Courtesy of Jas. Morrison Brass Mfg. Co.)

they are, radiate the light shed by the incandescent globes in every direction.

These drawing-room fixtures are being manufactured in many patterns, but brass, either burnished or unburnished, is generally used as the foundation work.

Brass also forms the greater part of an exceedingly artistic hall light—an other revival from the past. A torch, this is called, and by means of the flame

shaped globes made of art glass hang by brass pendants from tops of heavy beaten brass. Beautiful fixtures they are—fixtures which could not fail to improve any drawing-room.

The Louis XIV. design is a more decorated light for use in reception rooms. It has the fine carving, the scroll work, the high polish which seems suitable to the gay sovereign after whom it is called.

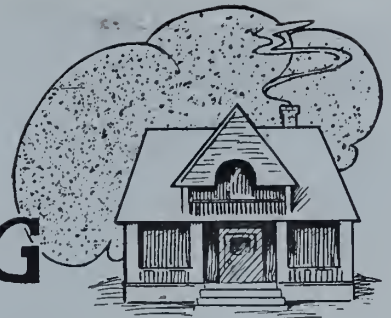


Torch for the hall.
(Courtesy of James Morrison Brass Mfg. Company.)



POINTS ON HEATING

by
CHAS. H. DENISON



If one looks for a standard from which to build according to his needs, in the heating business, I am afraid that he is in for a good long search. It seems as though the manufacturers had decided to give the smallest amount of information possible that would insure the sale of their goods.

With a very few exceptions, those who have reliable information on the subject, impart the ideas in such a form that the average fitter can hardly make head or tail of the matter under discussion. With all that has been said in favor of small pipes, even by myself in this series, I must confess that I never yet saw a job fail because the mains or branches were too large. In fact, many of the steam heating installations that fail do so simply because some of the pipes are too small. Speaking more to the mark there is too small a return pipe on the job that fails. Another point that causes failure is the improper grading of the pipes, which same has already been amply discussed in a previous chapter.

The mains and branches are the roads by which the steam must travel from the boiler to the radiators—and return. If they are too large for the job to which they are connected, the extra space will be occupied by steam, an extra amount, to be sure; BUT STILL SOMETHING IN RESERVE. To be sure (unless it is a vacuum job) there will be more air in the system which must be disposed of, but still you have more than a sufficiency. On the other hand if the pipes are too small for the work to which they have been put, the job must be forced in order to get any results at all. Such a plant can not show economical results and the few dollars saved in the first cost in the difference of pipe sizes, will be eaten up in the first or second season by the larger coal bills of the plant that had to be forced. The owner will be out of pocket, and cranky; the fitter will be blamed for his ignorance; or the master for his greed in cutting the job to the lowest extent to “break even.”

Pretty nearly every fitter who installs mains, has his own idea of the sizes of pipe that should be run to the different

radiators. Sometimes he figures them out; many times he “guesses they’ll do the work all right.” Consequently we have all sorts of advice regarding this important question of pipe sizes.

Take an example of a low pressure gravity steam job having some between 80 and 120 feet of main. The amount of radiation used on the various sizes of pipes vary surprisingly; a two-inch pipe being rated by one party as carrying about 290 square feet, while another claims that he has used 400 square feet on the same size.

Localities Differ.

At the first glance it would look as though some one was either too liberal or too saving. The average person does not stop to think, but condemns either or both and judges from simply his own experience. He does not stop to consider the different conditions that prevail in various places. To my mind both of these parties might be right (in their own locality). A steam job that will work all right in some town at the level of the sea, placed in some city high up in the mountains will perform in a mighty different fashion from the way it acted at the seashore.

Is the job located in Florida (and they do heat some of the houses down there) or is the plant to be installed in Manitoba? The average plumbing and heating shop confines its work to places within 100 miles, or less, from home. There are firms, though, which would do a job equally well in either place. From the questions raised, it seems to me that it would be impossible to get an exact standard that would govern the whole continent so that you could say, “A one inch pipe will carry 100 feet of radiation, a two-inch pipe will take care of 400 feet of radiation.”

Laying aside any consideration as to the length of the main, its exposure, its elevation above the water line of the boiler, or its pitch; the altitude, alone of the job would cut a figure, which must be taken into consideration. Nevertheless, in spite of all this mix-up and lack of definite information, one can get out a set of rules for himself that should

work well for the place in which he is located.

In doing this, be governed by common sense and get the idea in your head that you are going to work out your own salvation.

Take a steam job of, say, 400 feet of radiation (since I have used that number frequently as an example). We’ll consider the problem without any formulas whatever. Now, if the owner can go down, in the morning, and throw on three or four hods of coal and not have to attend the fire again until six o’clock, or perhaps later in the evening, the job carrying steam meanwhile and the house warmed to the satisfaction of the inmates, you would call that a fairly good working steam job.

What were the pipe sizes on that job? Make a note of it and file for compiling a table for reference. Suppose that you are next to another 400-foot job in your town, quite similar to the one you installed. Maybe the pipe sizes are entirely different. Go to it and get the data. Get the facts as to how this second job works. Which job works better? If the second job has the first “done brown,” why? It is reasonable to lay it to the pipe sizes, since the radiation, the location and the other points were practically the same.

Do not cease your investigations with these two jobs, but continue your chase after pointers, keeping a record of the result. After having examined some thirty to fifty, or more, jobs in your particular locality, you will have a mass of notes that will have to be arranged in some sort of system or a table. You will then be in shape to strike some sort of an average on the work for the locality in which you are placed, for straight gravity steam work; and it will be from practical jobs, not theory nor guessing. If we had 1,000 of such tables to consult, from different parts of the continent, we might be in shape to begin to figure on some sort of a standard as applied to different sections. Until we get something of the kind, to my mind, it will be a question of theory, or guessing, of which there has been far too much for the good of the business.



A Group of the Christie Boys. Reading From Left to Right, Those in the Picture are:—H. B., D. A., R. G., T. H. (deceased), A. D., W. J., Z. A., and J. H.

Seven Brothers Engaged in Same Trade

Business of Christie Bros. Was Started at Owen Sound Twenty-three Years Ago and Has Since Been Expanded — Two Other Establishments are Now Maintained.

NO family is better represented in the plumbing, tinning and hardware trade than the Christie boys, who conduct stores at Owen Sound, Winnipeg and West Toronto, and are largely interested in the manufacture of stoves. All members of the family now living are actively engaged in the business.

Owen Sound saw the commencement of the business. In February, 1888, J. H. Christie, who is the oldest of the family; W. J. Christie and A. Agar started a store, with plumbing and heating departments. The stand at present occupied, on Poulett street, was secured, and the business has never been moved during the twenty-three years that it has been in existence.

The three original members of the company carried on the business until 1895, when Mr. Agar retired. In April, 1902, the Christie Bros. Co. was formed, the two former partners taking into

the firm, D. A. Christie, T. H. Christie, Hugh B. Christie, R. G. Christie, Wilford Brown, A. Hair and A. Wilcox. Since that time the business has grown rapidly and is to-day one of the best-known in the Canadian retail trade. The present officers are:

President—J. H. Christie.
Vice-president—W. J. Christie.
Secy.-Treas.—D. A. Christie.
Director—W. L. Brown.

Stove Factory Started.

In 1904 the Canadian Heating & Ventilating Co., was formed for the manufacture of stoves, ranges, furnaces and registers. The moving spirits in effecting the organization were W. J. Christie, J. H. Christie, V. A. Harshaw, and a number of other Owen Sound men. Accordingly, W. J. Christie took over the management of the stove foundry and D. A. Christie succeeded him as manag-

er of the hardware department of the business at Owen Sound, J. H. Christie continuing in charge of the contracting, plumbing and heating departments.

Western Business Started.

Shortly after the inauguration of the Canadian Heating & Ventilating Co., Messrs. Jos. A. and A. D. Christie went to Winnipeg to handle the output of the factory for the western provinces.

Two years ago a branch store was opened in West Toronto, with H. B. Christie and R. G. Christie in charge.

News Briefs.

Geo. Bushey, Cookshire, Que., has opened a plumbing shop.

Sanitary drinking fountains are being installed in the London, Ont., schools.

A. G. Duck has started business in electrical supplies at Revelstoke, B. C.

T. H. McLaren of the Canadian Brass Co., Galt, has been ill at his home in Galt during the past week, but expects to resume his work in a few days.

A Trade Pioneer in the Far West

Fred Stork has Been Closely Associated With the Early History of Two Western Towns—Has Taken a Prominent Part in Municipal Life.

A REPRESENTATIVE of Plumber and Steamfitter had an interesting chat the other day with a pioneer of the far west in the person of Fred Stork, first mayor of Prince Rupert. It must not be implied from the use of the word "pioneer" that Mr. Stork belongs to the class of hardy veterans who treked to the country beyond the Great Lakes in the '50's or '60's. He is still a young man, but it has been his great good fortune to be among the founders and builders of several of the most promising of the new towns of the west.

Mr. Stork is a native of Bolton, Ont. He is a tinsmith by trade and was employed in Brantford for some years. Then the lure of the west caught him and he went to Fernie, B.C., where he opened up a plumbing, tinning and hardware business. With characteristic energy, he forged his way to the front, and the first thing his friends back east knew they saw in the papers the announcement of his election as mayor of Fernie. Mr. Stork became one of the

He did not wait for the town to grow, but went there at the very start, being brimful of confidence in its future. The town was scarcely visible to the naked eye when he arrived, and he was the first in his line of business to locate. The store and shop that he built was



The Present Establishment at Prince Rupert.

of a very unpretentious nature. The town soon grew, however, and so did the business of Fred Stork. Prince Rupert now boasts 5,000 population, and the present Stork store will compare very

the Pacific terminus of a great trans-continental railway. Mr. Stork was chosen as first mayor of Prince Rupert, which position he held until the first of the present year.

He has just returned from a trip to Europe. His prime object in making his trip was to witness the coronation. The day after this ceremony, he crossed to Paris, going thence to Rome, Naples and Pompeii. After a trip to the Island of Capri, he visited Switzerland and Germany, sailing down the Rhine

to Cologne. From Brussels he took a run out to the battlefield of Waterloo, then returning to London. After a brief tour of Scotland and Ireland, he was ready to sail home on the Mauretania.

In comparing notes with E. Holt Gurney, sales manager of the Gurney Foundry Co., Mr. Stork learned that Mr. Gurney was on the dock at Liver-



Fred Stork, pioneer plumber and tin smith, of Prince Rupert, and first mayor.

leading citizens of that thriving but unfortunate town (it has been fire-swept twice), but, when Prince Rupert was founded, he thought he saw a better opportunity there and he "treked" again.

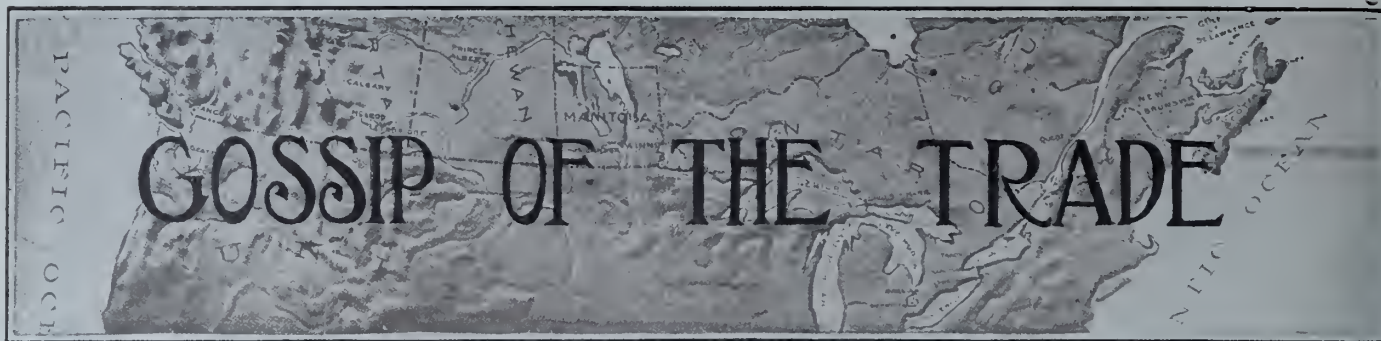
favorably with any retail premises in much older towns of a similar size. During the past year, Prince Rupert has laid out \$500,000 in street improvements and is preparing to fill her destiny as



One of the first stores in Prince Rupert.

pool watching the Mauretania pull out on the very day that Mr. Stork boarded her on his return trip.

"No wonder I didn't see him," said Mr. Stork, "for I was having the most strenuous time of my career trying to locate my trunk. I went from the railway baggage room to the cartage company's and back to the dock without getting a trace of it, and had just about made up my mind that I would land in New York and start on my trip to Prince Rupert with my trunk still in Liverpool. But, when I finally entered my stateroom, that trunk was the first thing that met my gaze."



Filters in Schools.

The Toronto Board of Education has equipped 70 public schools with water filters.

Starting in Business.

B. W. Lewis is starting in the plumbing and heating business at Battleford, Sask.

In New Premises.

Adam Hall, Ltd., Peterboro, have moved into new premises at the corner of Simcoe and Bethune streets, where they are continuing in the plumbing, heating and tinning business.

Must Have Permits.

Plumbing work cannot be done in Toronto without a permit. A plumber did some work at a Queen street house and was haled up before the magistrate. As he could not produce a permit, he was put to the inconvenience of producing \$5.

A Heavy Loss.

Fire, which is supposed to have started in a Japanese restaurant, at 6 o'clock in the morning, gutted one two-storey block at Elwin, B.C., completely, only those goods that could be hustled out into the street being saved. The other losers by the fire are Bayliss & Lawrence, plumbers. The property belonged to W. L. Gregg, and the loss will probably reach \$10,000.

Wants Another Inspector.

Ald. J. A. Pinard who is chairman of the Ottawa Board of Health, has asked the board of control to appoint a second assistant plumbing inspector. He states his present inspectors are overworked. Controller Hinchey will look into the matter.

Want New Agreement.

A new agreement is being negotiated between the Edmonton masters and journeymen. The journeymen are asking a minimum rate of 60 cents, leaving the maximum an open question. The masters have proposed a scale of 57½ cents, which is the rate prevailing in other cities of Alberta.

Fire Did Damage.

Fire broke out Friday, Sept. 1, in the plumbing and tinsmithing shop of Troumpour & Draper, Fifth St., Chatham, Ont. and though it lasted only a few minutes, it did about four hundred dollars damage to stock and machinery. Both were insured, but not very heavily. The interior of the shop was also badly scorched. Both the partners and their staff were away at dinner at the time, and no one knows how the fire started.

A Large Consignment.

R. Chestnut & Sons, Fredericton, are making a strong bid for plumbing work through the medium of newspaper advertising. They say:

Now is the time to see that your heating plant is in good working order for the coming winter. We make a specialty of hot air and hot water heating. We have recently received the largest consignment of plumbing goods that ever came into the city at one time. The shipment included bath tubs, lavatories, sinks and closets, which will be sold at lowest prices.

Heating System Not Ready.

It is now evident that the new steam heating system at the London, Ont., court house will not be ready for operation this winter. The steamfitters are pushing their work as fast as the alterations will allow, but as a new ventilation system is to be installed where the present furnaces are, this work cannot be proceeded with until the steam heat system is ready. The alterations are proceeding slowly, and indications are that they will not be completed before winter.

Severely Burned.

F. W. Cunningham, president of Cunningham's, Ltd., Vancouver, was taken to the General Hospital early on Sunday morning suffering from severe burns on the arms and hands, sustained while trying to extinguish a fire which broke out in his launch early on Sunday morning. As far as could be ascertained, Mr. Cunningham was sleeping on board his boat, preparing to leave for his camp on the North Arm. In some way the

gasoline tank exploded, setting fire to the launch. A call was sent in to the fire department, but before the engines arrived the boat was burned to the water's edge.

To Investigate Plant.

At a meeting of the Light, Heat and Power Committee, St. Thomas, it was decided to expend \$250 in an investigation of the municipal heating plant. The work will be done by the Richard E. Kimble Company, of New York, who are experts of high standing, and they will carefully look into the requirements of the plant and present plans for the improvement of the same in order to put the business on a paying and satisfactory basis.

Installed Pipe Threading Machine.

D. A. Ross, of Saskatoon, Sask., has installed a pipe threading machine made by the Oster Manufacturing Co., Cleveland, Ohio, U.S.A. The machine, which cost \$700, will cut from one to six inches and it is expected that it will be kept busy with work from other local plumbers. Mr. Ross is one of the most up-to-date and progressive plumbers in Western Canada. He has been in Saskatoon for a number of years and his business is growing as rapidly as is the city of Saskatoon.

Labor Day Celebration.

A Halifax news item reads as follows: "The Journeymen Plumbers' Union celebrated Labor Day yesterday with an "at home" at their rooms, and was perhaps the only local union which conducted a distinctly labor celebration of the day. Much of the credit for the affair is due to Donald Cummings, the Recording and Financial Secretary of the Union. There was music and light refreshment during the day and evening and the union members entertained a large number of guests."

The Manitoba Hardware and Lumber Co., has been awarded the contract for the heating and ventilating of the new town hall at Virden, Man.

A new hardware, grocery and plumbing business is to be opened at Nutana, Sask., by Rolph & Co.

News of the Manufacturers and Wholesalers

STRIKE DELAYS BUILDING.

The seas no longer divide. The goods of one nation are carried to another. Likewise there is a reciprocity in troubles. This is brought clearly home to the James Robertson Plumbing Supply Company, who have been unable to get far advanced with the new factory, to be erected on the corner of Spadina and Sullivan avenues, because of the recent strike in England.

There is a scarcity of steel. For some time this could not be brought over, and so the girders needed to continue the work have not yet arrived. "We'll just have to wait," remarked one of the company's officials. "If we could have got the steel we would have had the roof on by now, but it has not come."

Operations are well under way, and when the girders do arrive the work of construction will proceed rapidly. But when the new building will be ready for occupation can not be said as yet.

ARTICLES ON HEALTH.

Dr. J. W. S. McCullough, secretary of the Provincial Board of Health, intends to start a campaign for the improvement of the general health and sanitary conditions in the province by publishing every week, or semi-monthly, an article on general health matters. If an outbreak of disease occurs in any locality, his article will tell how best to cope with it, and will assist medical men and others in preventing the spread of disease.

TO MAKE GAS CONNECTIONS.

Winnipeg.—An arrangement of some importance has been effected between the City of Winnipeg and the Winnipeg Electric by which the latter will be granted permits for connecting up new gas services. About two years ago the city changed its policy and declined to issue permits in the way it had been doing for over a decade. The company was required to accept permits with an objectionable clause attached. This interruption arose out of the litigation which the city instituted. Since that time new houses erected in the city and many apartment blocks have not been able to get gas service. Now that the arrangement has been arrived at, practically 4,500 new services will have to be arranged for. It will be impossible for the company to reach all these before the winter sets in, and it is proposed by the

manager, Mr. Phillips, to provide mains and services where the greatest number of people will be accommodated.

COMPANY INCORPORATED.

The Sanitary Appliances is the name of a new company incorporated under the Ontario Companies Act, to take over the business of the Red Cross Sanitary Appliance Company, at Beamsville. The capital stock of the company is limited to \$108,000; and the provisional directors are A. H. McDonald, W. L. Barnard and T. C. Dougherty, all of Toronto.

TO COOL OR HEAT.

A device which may be used either as a cooler or heater of liquids under absolutely sanitary conditions, and also as a condensor on certain types of small engines, has been patented and will soon be placed on the market by the Universal Sanitary Cooler Company, Ltd., which has opened offices in the Winch building, Vancouver, and will shortly erect a factory for the manufacture of the device.

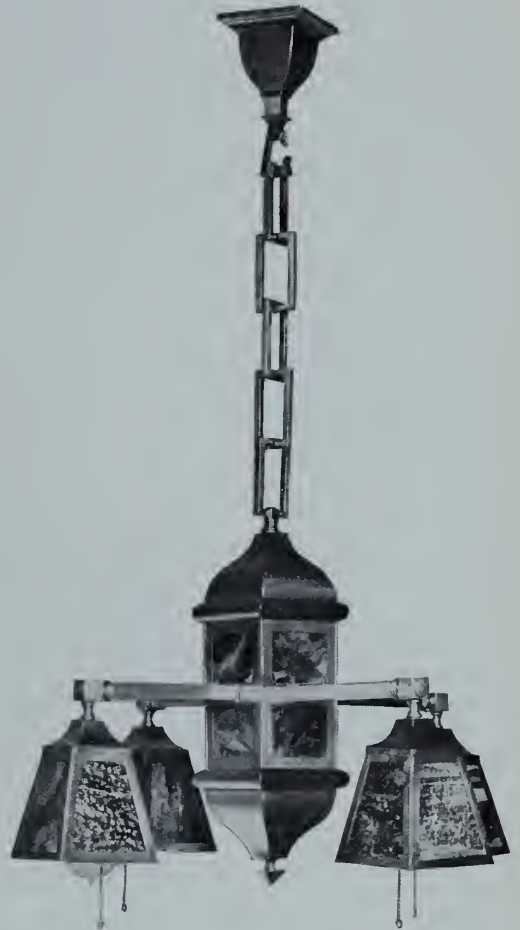
THE BY-LAW CARRIED.

Beamsville, Sept. 6.—Grimsby rate-payers carried the by-law yesterday to loan \$10,000 to the Radiant Electrical Company. The vote stood 217 to 18 against. The company will begin building operations at once, and employ 25 men to start. They will manufacture electric chafing dishes, toasters, flat-irons, kettles, etc.

WEDDING ANNIVERSARY.

On Saturday afternoon Mr. and Mrs. W. H. Wiggs, Quebec, celebrated the

twentieth anniversary of their wedding at their home Hessel Grove. Among the handsome gifts which were presented to them on this occasion was a richly decorated breakfast set of Menton



Latest Style of Mission Fixture for Den.

China, from the employes of Mr. Wiggs' establishment, the Mechanics' Supply Co.

Steamfitters Planning a Progressive Step.

Toronto, Sept. 13.—Progressive steps were decided upon at a meeting of the Steamfitters' Union in the Labor Temple last night. The advisability of organizing the helpers and improvers into a guild was discussed. George Milligan, the business agent, explained the project at some length.

No definite steps have as yet been taken, but the proposed plan of opening all the meetings to the apprentices

was looked upon with favor by the members of the union. These meetings will sometimes be taken up with technical discussions on the different branches of the trade for the benefit of apprentices who very often get experience in only one line of work. The union will also conduct examinations, and the apprentice, on finishing his five years of apprenticeship and passing the final examination, will be admitted to the union.

PLUMBING AND HEATING MARKETS

MONTREAL.

Montreal, Sept. 14.—The trade have been very busy of late and it has been reported that there is a difficulty in securing men. The newspapers contain quite a number of advertisements calling for assistants and this condition of affairs is a criterion of the amount of business that is passing. The pipe mills are working practically night and day and are at least extremely busy. The demand in practically all lines is heavy and prospects point to a continuation of activity throughout the season. Plumbers are busily engaged with work in hand and other construction under way gives a fair promise for the future.

Prices are generally firmer than usual. Zinc sheets are firmer, also lead pipe, galvanized pipe and sheets, solder and lead and spelter. The advance in the prices of lead and spelter has been responsible for the increases.

Soil Pipe.—There is a steady demand for soil pipe. Discounts quoted are heavy pipe, 70 and 10; 7 and 8 in. pipe, 50; light pipe, 60 and 10, and fittings 75.

Iron Pipe.—The heavy demand for iron pipe and fittings has been well maintained. Business has been very brisk, and mills report numerous overtime hours worked. Discounts on malleable fittings, 40; cast iron, 60; flanged unions, 65, nipples, 75 and 10; malleable lipped union, 65 per cent.

Lead Pipe.—There has been marked activity in lead pipe which is firmer in keeping with the price of lead.

TORONTO.

Toronto, Sept. 15.—The inability of the jobber to supply all the piping wanted has been a feature of the business of the past fortnight. In all lines the demand is heavy, but the manufacturers seem unable to keep up with the orders for some classes of galvanized piping. For enamelware, too, there is a heavy demand. Not only are large orders coming from city dealers, but also from those in the smaller places. The jobbers report that the farmers are making heavy purchases of these goods. Indeed, it is the large quantities sold in country places which has kept trade so brisk that many of the dealers are unable to keep up with their orders.

Enamelware.—All summer there has been a brisk demand for this line of goods, but now the orders are coming so fast that difficulty is being experienced in making the shipments without delay. "The business this year has been much greater than last," said the sales manager for one concern. His re-

mark was echoed by men holding similar positions in other houses.

Part of the demand for enamelware can be traced to the great building activity. But other things have proved factors. Many have been taking out old fittings and replacing them with up-to-date, sanitary equipment. Orders, too, have been coming from dealers who supply farmers. The small town plumbers have apparently made the men from the country see that they can have modern conveniences by establishing a tank and a cesspool. Said the manager of one concern; "We have sold 88 baths to a Brampton dealer, who wanted them to place in farm houses."

Boilers and Radiators.—Naturally the completion of the outside work on so many new buildings has made a heavy demand in this line. So far the jobbers have been able to keep up with the demand, but they report the last two weeks as the busiest of the year as far as this commodity is concerned. It is expected the demand will become even keener during the next month.

Soil Pipe.—The demand in this line is heavy. One firm reports an order for one hundred and fifty tons. That, added to the demand from other sources, is more than the concern can fill at once. The factory is turning out 52 tons a day, and yet shipments have to be delayed.

"We are not even leaving the pipe to dry properly now," stated one sales manager, "yet we cannot keep up with our orders."

Quotations on medium and heavy soil pipe are: 70 and 10. On the 7 and 8 inch sizes, the discount stands at 50 per cent.

Lead Pipe.—Still the price remains at the advance figure of nearly a month ago, the prevailing quotation being 27½ cents. The demand is steady. Lead waste sells at 9c per lb. and caulking lead at 4½ cents. Traps and bends are quoted at 50 per cent. discount.

Iron Pipe and Fittings.—The feature here is the great difficulty being experienced in getting ½ inch galvanized pipe. The three factories turning this out in Canada are unable to fill the orders sent in by jobbers. There seems no reason for this, except that the demand has increased greatly over that of last year. It is rumored, though, that the scarcity of this pipe may not be as real as it seems. For instance some of the jobbers believe they have been selling to some dealers who are not using the pipe at all, but are keeping it, either expecting a rise in price, or fearing that they will have an order which they will be unable to fill.

However, this may be, there is a great clamor for ½ inch galvanized pipe. "We get a car in one day and it is gone the next," said one manager. "I had 5,000 feet come in one morning this week," said another," and it was all disposed of before noon."

Quotations are as follows: Cast iron fittings, 65 to 70; malleable fittings, 37½ to 40 per cent.; cast iron bushings, 70; malleable, 67½; nipples, 75 and 10; headers, 60 and 10, although some quote 67½ and 70; flanged unions, 70; malleable-lipped unions, 67½ per cent.; galvanized pipe, \$6.18; black pipe, 1 inch size, \$1.54.

Solder.—Here there has been a slight change, but the prices remain high. Wiping, in the common grades, now sells at 21¼, the better grades at 25¼.

Metals.—Here the heavy demand has not started as yet. Orders are coming in, but not with the rapidity that they are in other lines. The business is not heavy, but satisfactory.

Tin.—Prices have fluctuated considerably within the last two weeks. Indeed it has been necessary to watch the reports on this commodity closely. August 31 tin stood at 46. Then it rose and jobbers had to pay from 48 to 50 cents, and necessarily sold at a still higher figure. But the rise, which came no one seems to know why, was short-lived, and again tin stands at 46. The demand is steady, but not so great that orders cannot be immediately filled.

Municipal Undertakings.

The contract has been let for a sewage disposal plant in North Toronto, to cost about \$30,000.

Plans are being prepared for waterworks and sewers at Red Deer, Alta., to cost \$35,000.

The construction of a septic tank, to cost \$25,000, is under consideration at St. Lambert, Que.

A trunk sewer, to cost \$17,000, is to be laid at Windsor, Ont.

Public Buildings.

A new post office is to be built at Lloydminster, Sask.

The school board at Olds, Alta., are considering the erection of a four or eight roomed school.

A \$25,000 theatre is to be built on Main Street, Vancouver.

Tenders are to be called for a \$400,000 hospital at Vancouver, to be conducted by the Sisters of Charity.

A \$122,000 church of the Fabrique Notre Dame des Sept Douleurs is to be built at Verdun, Que.

An addition is to be built to the Britannia Street high school, at Vancouver. It will cost \$123,799.



IMPERIAL

THE DEMAND FOR OUR

National Low Down Closet and Imperial Twin Jet Closet

combinations is growing rapidly. Proof of their good qualities. Send in your orders, we will take care of them. Full line of Plumbing Supplies in stock.

The National Plumbing Supply Company, Limited

115-117-119 Adelaide St. West, TORONTO



Hot Water Quick Opening Radiator Valve.

"Miller" Hot Water and Steam Radiator Valves

The bodies and bonnets of our Hot Water Quick Opening Radiator Valves are made in one piece, thus having a great advantage over other valves, as it leaves one less joint for possible leakage. The cone-shaped Disc prevents sticking.

Our superior Steam Radiator Valves have very low seats and a high lift of Disc.

We manufacture both valves from $\frac{1}{2}$ " to 2", with or without union, also union elbows.

Every valve is thoroughly tested and has an unlimited guarantee. They are built for service. Ask your jobber for them.



Steam Radiator Valve.

MILLER LIMITED, - LONDON, CAN.



KERR

Steam and Hot Water RADIATOR VALVES

are past the experimental stage.

They set the standard for high quality in material and finish and stand the many tests of use.

Note the seats in Kerr's New Pattern J.D. Radiator Valves which insure perfect drainage.

The Kerr Engine Co., Ltd.

VALVE SPECIALISTS

Walkerville - - Ontario

Dart Unions

GIVE  SAVE

PROFIT

LABOR

SATIS-
FACTION

TROUBLE
EXPENSE

Your Jobber Has Them

DART UNION CO., LTD.
TORONTO, CANADA

Dart Unions are made only with bronze to bronze ground joints with heavy iron ends and have the name DART cast on every one.

BLACK OR GALVANIZED

They are guaranteed to fulfill all our claims.

Condensed or "Want" Ads.

BUSINESS CHANCES.

FOR SALE—Plumbing and heating business at invoice price. Box 514, PLUMBER AND STEAMFITTER, Toronto. (19)

POSITIONS WANTED.

ENGLISHMAN, over four years' Canadian experience, desires position as stock and time-keeper. Knowledge of plumbing and heating. Advertiser 12a Hanover Street, Montreal. (19)

WANTED.

WANTED—Engineer accustomed to laying out and estimating on plumbing, steam heating and ventilation systems. Permanent position. Apply stating salary and experience, Box 590, PLUMBER AND STEAMFITTER, Toronto. (18)

MISCELLANEOUS.

ADDING TYPEWRITERS write, add or subtract in one operation. Elliott Fisher, Limited, Room 314, Stair Building, Toronto.

BOOK-KEEPING STAFF IN ITSELF DOING the work with machine precision and accuracy—the National Cash Register. Write for demonstration literature. National Cash Register Co., 285 Yonge Street, Toronto.

ACCURATE COST KEEPING IS EASY if you have a Day Cost Keeper. It automatically records actual time spent on each operation down to the decimal fraction of an hour. Several operations of jobs can be recorded on one card. For small firms we recommend this as an excellent combination—employees' time register and cost keeper. Whether you employ a few or hundreds of hands, we can supply you with a machine suited to your requirements. Write for catalog. International Time Recording Company of Canada, Limited; office and factory, 29 Alice Street, Toronto.

BUSINESS-GETTING Typewritten Letters and real printing can be quickly and easily turned out by the Multigraph in your own office—actual typewriting for letter-forms, real printing for stationery and advertising, saving 25% to 75% of average annual printing cost. AMERICAN MULTIGRAPH SALES CO., Limited, 129 Bay St., Toronto.

COPELAND-CHATTERSON SYSTEMS—Short, simple. Adapted to all classes of business. The Copeland-Chatterson Company, Limited, Toronto and Ottawa. (1f)

COUNTER CHECK BOOKS.—Write us to-day for samples. We are manufacturers of the famous Surety Non-Smut Duplicating and Triplicating Counter Check Books and Single Carbon Pads in all varieties. Dominion Register Co., Ltd., Toronto.

COUNTER CHECK BOOKS—Especially made for the plumbing and steamfitting trade. Not made by a trust. Send us samples of what you are using—we'll send you right prices. Our holder with patent carbon attachment has no equal on the market. Supplies for binders and monthly account systems. Business Systems, Limited, Manufacturing Stationers, Toronto.

DOUBLE your floor space. An Otis-Fensom hand-power elevator will double your floor space, enable you to use that upper floor either as stock room or as extra selling space, at the same time increasing space on your ground floor. Costs only \$70. Write for catalogue "B." The Otis-Fensom Elevator Co., Traders Bank Building, Toronto. (1f)

EGRY BUSINESS SYSTEMS are devised to suit every department of every business. They are labor and time savers. Produce results up to the requirements of merchants and manufacturers. Inquire from our nearest office. Egray Register Co., Dayton, Ohio; 123 Bay St., Toronto; 258½ Portage Ave., Winnipeg; 308 Richards St., Vancouver.

FIRE INSURANCE. INSURE IN THE HARTFORD. Agencies everywhere in Canada. (1f)

HUNDREDS OF TYPEWRITERS of every make and condition are being traded in as part payment on the famous MONARCH. Price and quality are the levers we use to prevent over stock. We believe we can give the best bargains in rebuilt typewriters in Canada. A postal will bring our catalogue and full information. The Monarch Typewriter Co., Limited, 46 Adelaide Street West, Toronto.

KAY'S FURNITURE CATALOGUE No. 306 contains 160 pages of fine half-tone engravings of newest designs in Carpets, Rugs, Furniture, Draperies, Wall Papers and Pottery with cash prices. Write for a copy—it's free. John Kay Company, Limited, 36 King St. West, Toronto.

MOORE'S Non-Leakable Fountain Pens. If you have fountain pen troubles of your own, the best remedy is to go to your stationer and purchase from him a Moore's Non-Leakable Fountain Pen. This is the one pen that gives universal satisfaction and it costs no more than you pay for one not as good. Price \$2.50 and upwards. W. J. GAGE & CO., Ltd., Toronto, Sole Agents for Canada.

MODERN FIREPROOF CONSTRUCTION. Our system of reinforced concrete work, as successfully used in many of Canada's largest buildings, gives better results at lower cost. "A strong statement" you will say. Write us and let us prove our claims. That's fair. Leach Concrete Co., Limited, 100 King St. West, Toronto.

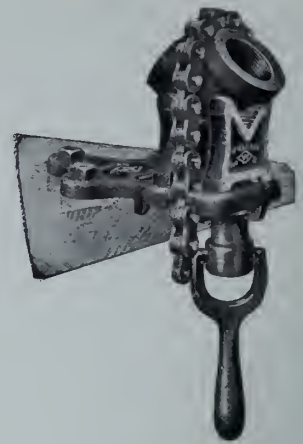
PENS—The very best Pens made are those manufactured by William Mitchell Pens, Limited, London, England. W. J. Gage & Co., Limited, Toronto, are sole agents for Canada. Ask your stationer for a 25c. assorted box of Mitchell's Pens and find the pen to suit you.

THE "Kalamazoo" Loose Leaf Binder is the only binder that will hold just as many sheets as you actually require and no more. The back is flexible, writing surface flat, alignment perfect. It cannot get out of order. No exposed metal parts or complicated mechanism. Write for booklet. Warwick Bros. & Rutter, Ltd., King and Spadina, Toronto.

WAREHOUSE AND FACTORY HEATING SYSTEMS. Taylor-Forbes Company, Limited. Supplied by the trade throughout Canada.

ONE of the most successful retailers of late years says: "When a firm advertises in trade papers it is getting into good company. As I pick up one of a dozen of these periodicals here in my office, and glance through it, I find that the best people, the successful firms, are represented in such a way as to reflect their importance in the trade."

Nature has solved the problem of distribution. It uses a multitude of agents to effect the distribution of its products. Nature does not expect every seed to fall upon fallow ground and to take root. But, it achieves a profitable percentage upon its distribution. This is all that an advertiser has to do to reap a profitable harvest on his outlay.



Irregular Pinches!

Vulcan Vise

is not alone far superior as a tool for regular pipe and fittings work, but really "the only grip," for objects otherwise out of the question in regular bench vise.

It isn't any bigger than a box of Biscuits, and you can wind up an unfailing grip as easily as you do your cock, but in one-tenth the time.

You get a gripping service within the wide range of from 1/4 in. to 4 1/2 in. diameters, in one "handful" of tool.

You get an enduring, unbreakable-in-service tool that must in every way confirm the manufacturers' guarantee.

"I wouldn't take \$10.00 a piece for them to-day if I couldn't get another."—Moore.

They won't cost you as much!

Consult your dealer.

J. H. WILLIAMS & CO.

Superior Drop-Forgings.

77 Richards St., Brooklyn, N.Y.



DIRECTORY OF MANUFACTURERS

Plumber and Steamfitter receives, from time to time, enquiries for the names of manufacturers of various lines. These enquiries come from firms who usually intimate they have looked through Plumber and Steamfitter but cannot find any firm advertising the line in question. In many cases these firms are anxious to secure the information at once. This page enables manufacturers to keep constantly before the trade lines which it would not pay to advertise in larger space.

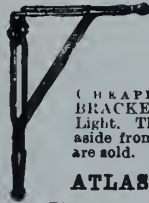
EMERY WHEELS.



Canadian Hart Wheels

442 Barton St. East, Hamilton
Corundum and Emery Wheels
Grinding Machines, Beaver
Oil Stones.

SHELF BRACKETS.



Will Hold Up a Shelf

That's what a shelf bracket's for
For this purpose there can be
NOTHING BETTER, NOTHING
CHEAPER than the BRADLEY STEEL
BRACKET. It is well Japanned, Strong and
Light. The saving on freight is a good profit
aside from the lower price at which the goods
are sold. Order direct or through your jobber.

ATLAS MFG. CO., NEW HAVEN



THIS IS THE DAY OF

INVESTIGATION

Get in line and let us prove
to you that the

GENUINE
Armstrong Stocks and Dies

ARE THE BEST.

Catalogue on request.



The Armstrong Mfg. Co.
317 Knowlton St.
Bridgeport, Conn.

When writing advertisers kindly men-
tion having seen the advertisement in
this paper.

FILTERS.

Anti-Splash Tap Fitters

The "Galvo" Filter and Water Steriliser
"Perfection" Fire Extinguishers

There's good money in them for hardware dealers.
Write for Prices.

The Anti-Splash Filter Co.
OWEN SOUND - - ONTARIO

BRONZE POWDERS

BRONZE LIQUIDS

The
Canadian Bronze
Powder Works

Montreal Toronto
Works, Valleyfield

Send us your orders and we guarantee the
quality

SIPHONS

FOR

SEPTIC TANKS

ALLAN POPE :: MONTREAL

MANUFACTURERS' AGENTS.

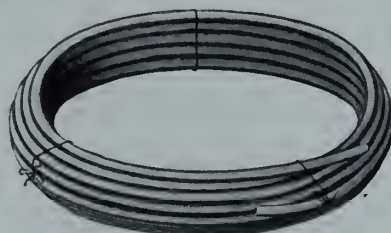
Western Distributors, Limited CUSTOMS BROKERS

Wholesale Commission Merchants and Manufac-
turers' Agents. Cars Distributed, Warehoused
and Forwarded. Warehouse on Trans-
fer Track. Business solicited.

OUR POSITION IS YOUR OPPORTUNITY
SASKATOON, WESTERN CANADA

WE MANUFACTURE FOR THE PLUMBER

LEAD PIPE
LEAD WASTE
HYDRAULIC
DRAWN TRAPS
NON-SIPHON
CENTRIFUGAL
CAST TRAPS

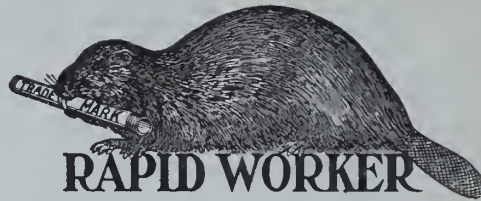


1-8 to 8 inches

WRITE FOR PRICES

SOLDER
FOR ALL
REQUIREMENTS

The Canada Metal Co., Ltd., FRASER AVE., Toronto



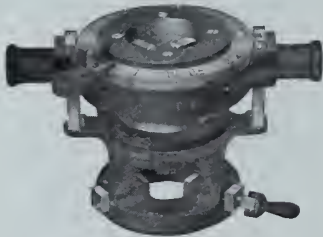
RAPID WORKER

One man with a Beaver Die Stock is worth two or three men with any other Die Stock made.

"Beaver" Adjustable Die Stocks

HAVE cut the cost of pipe threading in two because they will thread all sizes of pipe without changing dies.

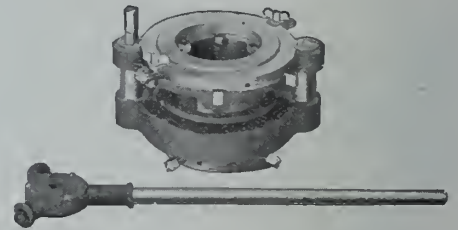
They are built on the receding principle which positively enables one man to thread any size of pipe and produce absolutely tight joints for all work, including hot water. They save the time formerly used up in changing dies and looking after loose parts, and eliminate all of thread-stripping when backing off.



No. 25A, threading 1, 1¼, 1½, 2-inch pipe.
A boy can operate it,



No. 6, threading ¼, ½, ¾, 1 inch, complet



No. 60. Uses two sets of dies. One set cuts 2½, 3, 3½ in. the other cuts 4, 4½, 5, 6 in.; they are inserted without removing any parts.

No loose Bushings or loose Dies on No 25A and No 6, and they cut 1, 1¼, 1½ and 2-inch pipes.

We can furnish a separate set of dies for 1, 1¼, 1½ and 2-inch pipe.

Write us for Illustrated Price Lists.

BORDEN CANADIAN COMPANY,
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Under Expert Examination our

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Our radiators are very artistic and are made of the choicest grade of materials.

They are guaranteed to bring the best results, because every valve, every casting and every joint are absolutely efficient and reliable.

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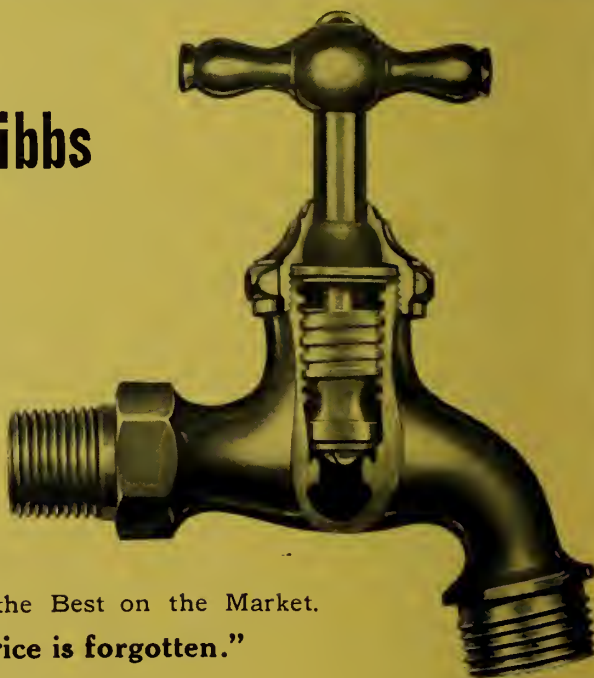
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PLUMBER & STEAMFITTER

and Sanitary Engineer of Canada

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Vol. V.

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No. 19



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CLOSET COMBINATIONS insure the
Highest Degree of Perfect
Sanitation, because they are
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Would he be worth \$200, \$300 or \$500 per week? Many a house would pretty nearly let him fix his own salary.

Equip an advertisement in this paper with a verbal handshake for every dealer in Canada, and a frank, brief, pointed talk about your goods and you add a traveller to your staff who will make thousands of calls a week for you at a salary of \$4 to \$8 a week—less than you would pay a first-class stenographer.

Of course this traveller won't displace any of your regular salesmen, but he will help them to sell more goods and open up more new accounts.



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The "Rapid" Instantaneous Bath Heater

is bound to please you and your customers; not a weak point in it. Absolutely guaranteed. Not necessary to use a vent pipe. All gas valves adjustable to local gas pressures, insuring perfect combustion. We claim the "Rapid" will heat more water with less gas consumption than any other instantaneous heater on the market. Make us prove it by sending us or giving your jobber a sample order.

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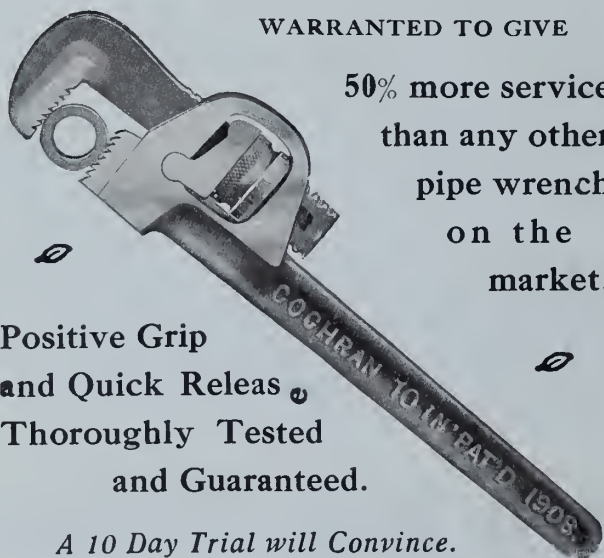
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CLEVELAND AUTOMATIC RATCHET

It lightens labor and makes work a pleasure.

And an operator can save enough time on one average job to pay for the tool, after which it returns a handsome profit on every job. Do you know of a better investment?

Don't do unnecessary work. Let the CLEVELAND AUTOMATIC RATCHET do the work for you. It will work quicker and better than any old time ratchet.

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Write to-day for prices and further information

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They are designed and built on original and advanced scientific lines of superfine material

Material that costs us three times what any other manufacturer in the Union is willing to pay.

It is obvious that Nye models are worthy of the stuff that is in them. WE COULD NOT AFFORD TO PUT JESSOP'S CENTURY-FAMED TOOL STEEL INTO COMMON OR INFERIOR DIES. Nye dies are not slightly modified examples of old and deficient types. They embrace structural features that assure a maximum of service with a minimum of labor and reach a standard attained by no other Dies on the market.



Armstrong Pattern

The mechanic who uses NYE DIES enjoys the comfortable feeling which comes from being adequately equipped for any task.

You can TRY any of my Tools on FREE TRIAL. You'll become a Nye convert like thousands of others.

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IRON PIPE BARGAINS

We have over 450,000 feet of slightly used piping, just as good as new, and first-class for Water, Steam, heating Greenhouses, Construction, Fencing, Posts, etc., at 25% to 50% less than regular value. Also 150 Radiators, Box and Wire Coils, etc.

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Diameter	1/2 in.	3/4 in.	1 in.	1 1/4 in.	1 1/2 in.	2 in.
Price Per Foot....	2c	2 1/2 c.	3c.	4c.	5c.	7c.

Also other sizes up to 10 inches

Send us a list of the lengths you need and we will give you a special price on the lot, cut and threaded, ready to put together. We also have enormous quantities of Wire Fencing, Belting, Pulleys, Shafting, Cable, Rails, New Roofing, Saws, Vises, Forges, etc., at 25% to 75% less than regular value. Catalogue sent on request.

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BLACK and GALVANIZED. SIZES, 1/8 IN. TO 4 IN.

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Plumber and Steamfitter

and Sanitary Engineer of Canada

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TORONTO, OCTOBER 2, 1911

THE SECOND annual convention of the Ontario Society of Sanitary and Heating Engineers will be held on Thanksgiving Day in Toronto. It is highly important that this gathering should be largely attended. The work in Ontario has reached an important stage.

ATTEND THE CONVENTION. New ideas have been promulgated which will require united and active support to put successfully into effect.

If success is attained the trade will benefit to a wonderful degree. It will be possible to eliminate evils which now exist, and, by bringing the members of the trade closely together, pave the way for other, and greater, reforms.

Since the last convention many new local associations have been formed. It is highly advisable that each local should have a delegate, or delegates, present; only in that way can the gathering be made thoroughly representative. There is plenty of time for the locals to attend to this matter and appoint delegates, with instructions to be present without fail.

THE SPECIMENS shown in the article on faulty installations in this issue are typical of the kind of work that, unfortunately, is very common.

SECRETARY JOHN WATSON is working like a Trojan trying to get information which will enable the society to do more effective work. Letters by the score he has written, but the replies received have been few.

GIVE THE SECRETARY YOUR ASSISTANCE.

An appropriation has been made for a paid secretary to help Mr. Watson carry on his work, and yet it seems what he needs even more is the hearty co-operation of the members. It is not that the plumbers lack interest in the work of the society. It is not, probably, that they are not willing to help. But they procrastinate, and ten times out of ten procrastination means that a thing is not done.

Yes, these letters of the secretary need attention. They must be answered if the society's influence is to increase as it may. The secretary is freely giving his time to carry on an extensive correspondence. Surely the least each individual member can do is to send a prompt reply.

PROPER surroundings will do more to avert disease than any amount of medicine.

THE SUCCESSFUL man is often the one who has had the sense to pick out his own faults and weaknesses and has taken pains to remedy them. An occasional half-hour spent in self catechising will be found very valuable.

PROFITING BY SELF-EXAMINATION. Our Australian contemporary, "Plumbing and Lighting," suggests the following questions as among those which every man in the sanitary and heating trade should ask himself:

Is your net profit what it should be on the volume of business you are doing?

Do you know what the total cost of operating your business is for a month or a year?

Do you know what your fixed expenses are for a month or a year, whether you do much or little business?

Do you know the amount of non-productive time you pay for which cannot be charged either to your customers or your contracts?

Do you make a sure first profit by discounting your bills?

Do you pay yourself as much salary as you would have to pay another to take your place or even as much as you could earn as a mechanic?

Do you charge depreciation on stock, tools, etc., as part of your operating expenses?

Do you pay yourself on your investment the same as you would receive if your money was invested in first-class securities?

Do you make a proper charge to cover discounts and deductions to customers, as well as bad accounts?

Do you know how much you make each month or year on your jobbing business separate from your contracts?

Are you reducing the amount of your losses or are they growing?

AN HONEST tee is the best policy.

ON ANOTHER page reference will be found to the steps taken by the provincial health authorities of Saskatchewan in the matter of plumbing regulations. A new draft has been drawn up and published for the benefit of municipal boards of health in that province. One of the underlying motives for the issue of this draft is the desire to establish uniformity in plumbing ordinances. The medical authorities have recognized the necessity for bringing order out of the chaos of

divergent regulations, which exist there as elsewhere. If the clauses contained in the draft were severally adopted by the different councils or boards of health, a great improvement in trade conditions in that province would at once be felt. It will take time to bring this about, but the first step has been taken. The campaign has been started in the right way.

It would be highly satisfactory if all other provinces followed this example. Of course, no improvement would be effected if each province set its own standard independent of the others. It would be necessary for the work to be done in concert.

The first step toward this end will probably have to come from the trade. An agitation properly handled would soon focus the attention of the authorities on the subject. Why not start now?

If each local association would discuss the problem, pass it on to the provincial, and from there to the national, the matter would soon be dealt with, and, we trust, settled to the great benefit of the trade.



ONE HUNDRED delegates at least should attend the Ontario convention on Thanksgiving Day.



IN THIS ISSUE an extended reference will be found to the International Hygiene Exhibition, held this year at Dresden, Germany. In the course of an interview with Dr. J. F. Honsberger, of Berlin, Ont., who acted as the official representative of Canada at

THE OUNCE OF PREVENTION. the exhibition, some interesting facts were gleaned by the editor of Plumber and Steamfitter with reference to the accepted importance of sanitary appliances in relation to health.

Medical men are now applying the old adage that "an ounce of prevention is worth a pound of cure," in dealing with health problems. They recognize that it is time man started to practise, as well as preach, this truism. Accordingly, they are urging the establishment of better conditions in the home, the factory and the city. A well-heated, well-ventilated and thoroughly equipped home is one of the sturdiest ramparts man could erect against the inroads of disease. If fullest care were taken to see that modes of living were attuned to healthful precepts, that homes were kept sanitary, factories were ventilated and cities properly laid out, the health problem would be practically solved. Apply the ounce of prevention and the pound of cure will not be required.

It will readily be agreed that this point should be strongly urged. The sooner boards of health, municipal councils and governments, as well as private individuals, awaken to the necessity of applying the theory of prevention, the better it will be for the human race. Members of the sanitary and heating trade are very much interested in this question from every standpoint. Their work in improving methods of sanitation has been a great factor in arousing the present agitation for better modes of living; their part in future developments will be equally important.



THE EAVETROUGHING was removed from a Toronto house the other day, and it was found that, although it had been up since 1871, it was still in a fairly good state of preservation. This speaks highly for the work of the tinsmith of forty years ago.

AFTER AN election the partisan element is largely eliminated, and business men are more inclined to discuss questions on their merits. A manufacturer in eastern Ontario who worked against the Conservatives in the recent campaign stated the day after elections he was not sorry the reciprocity bill was defeated, as it would show both political parties that the majority of the people wanted stability in tariff matters.

There has been a feeling of unrest among United States manufacturers during the past few years, owing to the probability of a reduction in their tariff. Most manufacturers decided not to add any new machinery or make any extensions to their plant till they were assured that the Government was through revising the tariff. Much the same situation has been developing in Canada, but the period of suspense has been of short duration, and the verdict of the people, given September 21, has made it plain that all classes are in favor of stability in tariff affairs.

Canadian manufacturers will now feel safe in going ahead with extensions they had contemplated. A number of United States and British firms, either rightly or wrongly, expected that if the reciprocity agreement carried, it would be followed very shortly by a general reduction in duty on manufactured goods. These firms will now feel more inclined to establish Canadian branch factories, knowing that there is very little chance of any reduction in the tariff during the next decade at least.

Complaint has been made for some years that goods are being "dumped" into the Canadian market. A special clause was inserted in the tariff about seven years ago with a view to making it impossible to invoice goods for duty at a lower price than they were being sold in the home market. This clause has not been strictly enforced, and to meet this competition, some Canadian manufacturers have been compelled to sell their season's output at a loss. This is grossly unfair, both to the Canadian manufacturer and to the buyer, who will not make a false statement to secure a lower price. It is putting a handicap on honesty, and the Government will do well to put forth every effort to make the dumping clause serve the purpose for which it was intended.



"WHY," asks a subscriber, "is W. G. Weichel, of Waterloo, like an ace?" Easy. He beat a King."

* * *

A PLENTITUDE of golden wheat means an equal plentitude of golden dollars. The Western trade can expect busy conditions this fall.

* * *

PASTE THIS date on the wall in front of your desk. Convention of Ontario Society of Sanitary and Heating Engineers at Toronto on Thanksgiving Day.

* * *

NOW THAT the elections are over, all M. P.'s will be able to get back to work. Not Members of Parliament, but Master Plumbers.

* * *

ISN'T IT time that the township boards of health discarded their "masterly policy of inactivity" on the question of sanitary conditions in country homes?

* * *

WHAT HAS been done toward the formation of local and provincial associations in your districts? This question may well be directed to each provincial vice-president. It is not too early to begin work.

Canadian Society of Sanitary and Heating Engineers

JAMES E. WALSH, PRESIDENT
MONTREAL

E. J. YOUNG, VICE-PRESIDENT
CALGARY

E. D. HIGGINBOTTOM, TREASURER
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HEATING AND VENTILATION
J. PRIESTLY, Calgary

Convention Set for Thanksgiving Day

Members of Ontario Society Will Meet at Toronto on That Date—A Full Attendance is Desired—Complete Details in Next Issue.

TORONTO, Sept. 29.—At a meeting of the executive officers of the Ontario Society of Sanitary and Heating Engineers last night it was decided to hold the second annual convention in this city on Thanksgiving Day, October 30th.

The meeting will be an important one in many respects. The legislation put into effect at the organization convention on Good Friday entailed many vital changes, and the reports submitted by the officers at the coming convention will, therefore, be of great interest. It will be shown that splendid progress has been made toward the securing of a provincial charter. As all other legislation hinged to a great extent on the terms of the charter, this matter alone is of sufficient importance to draw a record-breaking attendance.

Details of the programme for the day

were discussed, but it will not be possible to make any definite announcement until the next issue. Some entertainment features will be arranged, but just what form they will take cannot at present writing be said.

To Promote Attendance.

An energetic campaign will be started at once to bring the members out. A large and representative attendance at the convention is particularly desirable as the future of the society will depend very largely on the steps taken on this occasion.

Circulars will be sent out and personal efforts will be made to induce a large attendance. All members of the trade are particularly requested to watch for the next issue of Plumber and Steamfitter, when full details of the convention will be given.

New Plumbing Regulations Issued

Provincial Health Authorities in Saskatchewan Have Formulated a Draft for Municipal Adoption—A Desire for Uniformity has Prompted Measure.

REGINA, Sept. 20.—The Saskatchewan Bureau of Public Health has issued a new draft of plumbing regulations for that province, the same being approved for adoption by municipal health authorities. The following announcement is made:

"The following regulations have been approved, so that house drainage in the Province may be carried out on sound principles, and on a basis of uniformity.

"The regulations are based on a standard of efficiency without being too exacting, and are suitable for adoption either by the village or city.

"Plumbing being essentially a matter of sanitation, it is expedient that it be under the jurisdiction and control of Health Boards or Committees of Health, upon whom shall rest the responsibility for the proper and efficient installing of all house drainage."

The Clauses.

1. All connections with the common or public sewers must be applied for on prescribed forms (to be supplied) and approved by the engineer or other official in charge of the sewerage works. When so approved, the engineer shall direct and cause such connections to be

made within a reasonable time from date of application.

2. Before proceeding to construct, reconstruct or extend any portion of the drainage or plumbing, or any part thereof, in any premises, the owner or his agent shall make application on forms to be supplied, for a permit therefor to medical health officer of the board of health or health committee, such application to be accompanied by a specification or abstract of the proposed work.

3. In buildings having more than five fixtures, a plan shall be required with the application, showing the location and size of the house drain, with any traps, inspection pieces, or cleanout screws that may be thereon, and a section showing the vertical soil pipe with all branch connections thereto, as well as all necessary ventilating pipes.

4. When plans have been approved by the board of health or health committee, a permit shall be granted under the hand of the sanitary inspector or other official, to whom the board may designate the duty. Any alterations from the original plan must be approved in writing by the official inspector.

5. All plans or blue prints (not necessarily to scale) shall be legible and drawn in ink, and such plans shall be retained by the inspector and filed with application for future reference.

6. Fees for permits to cover cost of inspection and entering records shall be such as may be fixed by the local board of health.

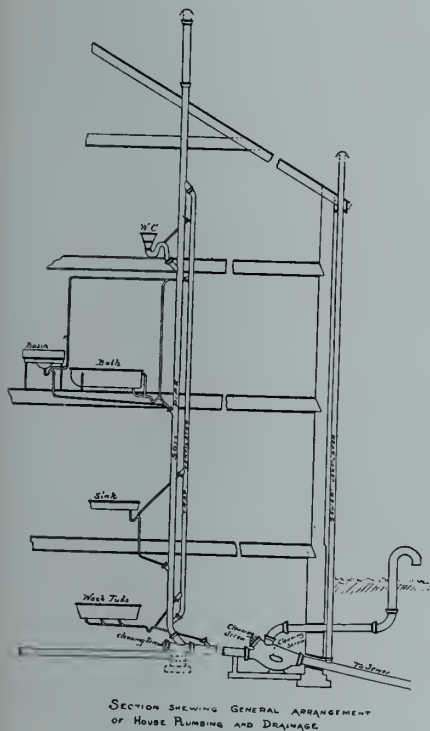
7. Permits shall be granted or refused within three days from date application is received, and, if granted, shall be valid for six months or such other period as may be determined by the local board of health.

8. No person shall construct, reconstruct or extend any portion of the drainage or plumbing of any premises until he has satisfied himself that a permit to do such work has been obtained as required by these regulations.

9. House drains must in no case be less than four inches in diameter, and

may in no case exceed six inches except by special permission of the official inspector. They must be laid on an even grade, in straight lines, and have a fall towards the outlet of not less than one in forty. Where a change of direction is necessary, proper bends or junctions must be used, and no tributary or branch drain shall join at right angles. In cellars or basements in buildings of four or more storeys, the drains shall be of heavy cast iron soil pipes.

10. Drains may have either direct connection with sewer or have an intercepting trap on main drain, with clean-out screw, just inside external wall. If the latter method is adopted, provision must be made for fresh air inlet to house side of trap, and ventilation of sewer by ventilating pipe carried up out-



side of building. The plumber shall be responsible for the connection of his work with the sewer connection.

11. Each cellar or basement shall be drained into a cast iron running trap, the same size as the drain, with side or back hub inlet, fitted with grating to take floor drainage. Seepage or subsoil water to be drained into hub inlet of said trap under floors, properly protected with broken stones or brick bats. Under certain circumstances a pit may be allowed, from which the trap shall drain, but the pit must not exceed two feet square or be deeper than twelve inches below the floor level. Provision should be made against trap becoming unsealed by evaporation.

12. Each building or separate part of a building shall have its own separate soil pipe until it passes outside of wall. Cleanout screws or inspection pieces

must be placed at foot of vertical soil pipe, and on drain near its exit to sewer in such positions as to be easy of access for cleaning rods.

13. All soil pipes must be carried up full size, and waste or vent pipes, if carried through roof, must be increased to three inches from a point three feet before passing through roof. Vent pipes may connect to soil pipes above highest fixture. Every soil, waste, or vent pipe, shall be extended at least two feet through roof, and shall be at least two feet above highest window or opening of the main building, and distant not less than ten feet from any window in any building.

14. The vertical portion of the soil pipe must rest on a solid foundation, and is not to be hung or fastened to any floor or wall, horizontal run of pipe either to rest on built piers or hang from joists with strong iron stirrups at every eight feet.

15. If soil pipes are of cast iron, they shall be spigot and faucet pipes of sufficient weight to be caulked with lead, the depth of lead forming joint to be at least one and one half inches, and the lead to be run in one heat. All offsets for branch connections shall form part of the castings, and any lead pipe connections thereto shall form part of the castings, and any lead pipe connections thereto shall be of brass ferrule with caulked and wiped joints. All fittings, bends, traps, etc., shall correspond in weight and quality with soil or waste pipes used. If wrought iron pipes are used, they shall be constructed as specified for Durham system.

16. All pipes and traps shall be so placed as to be easily traced and inspected, and, where necessary closed, hinged covers or doors must be used.

17. No rain water conductor shall be used as a soil, waste or vent pipe, or vice versa. Buildings having gutters or spouting for roof water with conductors connecting to sewers through house drains shall discharge into deep seal traps inside of basement wall before entering drain, and such traps must be in accessible positions. All rain water leaders within buildings shall be of medium cast iron pipe with lead caulked joints.

18. No refrigerator waste, exhaust steam or overflow pipe from any fixture shall be directly connected with any soil pipe, waste or sewer connection, but shall discharge openly into a sink or other trapped fixture.

19. No waste pipe from any fixture shall be smaller than one and one quarter inches, and no vent pipe smaller than one and one quarter inches.

20. All rooms in which water closets are placed must be ventilated by a window or ventilator opening to the external air, and no water closets will be allowed in cellars or basements unless

light and ventilation are provided to the satisfaction of the medical health officer or sanitary inspector.

21. Water closets shall in no case be flushed directly from water supply pipes, but shall be provided with a separate cistern or flushing tank of not less than three gallons capacity, with ball tap service. Closets must be so constructed as to be fully flushed at each discharge. Connections must not be made into closet bends or traps. Pan, plug, valve or plunger closets are prohibited in all water carriage systems of house drainage.

22. In buildings where two or more closets are over each other, traps or bends must be ventilated by a vent pipe not less than two inches in diameter. Any overflow from closet basin must be led into closet trap. Cistern overflows to be open to sight and led into bath or basin fixture.

23. In schools or factories a group of closets on the trough or range system, supplied by one flush tank, may be permitted, provided the flush is by automatic action, of sufficient volume and regulated to discharge frequently. In such buildings separate accommodation to be provided for the sexes, and not less than one seat to every twenty-five persons.

24. Where slop sinks are used they shall have traps similar to water closets, of three inches diameter, and be ventilated by a vent pipe one size smaller than waste pipe. They must be provided either with a tap or cistern flush.

25. Rooms in which urinals are placed must have impervious floors, or have safes of noncorrosive and nonabsorbent material placed under fixtures. Urinal fixtures must be drained through a deep seal trap, provided with an automatic or continuous flush.

26. All other fixtures, such as baths, basins, tubs, sinks, etc., shall be properly trapped and ventilated. In case of wash basins one trap may serve for a range of four, waste pipe and trap to be not less than one and one half inches. When baths have a four-inch drum or pot trap with a screw down cleanout at floor level, and the bath and basin waste are branched into one, only the basin trap need be vented.

27. All fixtures must be glazed earthenware, porcelain or enamelled iron (lead lined sinks may be allowed in hotels and restaurants) supported on metal brackets or uprights, and shall in no case be inclosed with wood.

28. Outflows of sinks, tubs, basins, etc., must have brass strainers to prevent solid matters reaching the drains.

29. Traps of fixtures shall be placed as near thereto as possible and have brass cleaning screws at bottom of traps.

30. Grease traps of sufficient size shall be placed on the waste pipes from all hotels, restaurants, laundries and other places where the medical health officer or sanitary inspector may direct, such grease traps to be kept in order by the occupier of the premises.

31. The venting of the plumbing system shall be on the loop or continuous methods, all branch venting pipes being led into a main vertical ventilating stack, having its lower end returned or branched into the main soil pipe stack below the lowest fixture. Vent pipes must have a continuous slope to avoid water collecting from condensation. No chimney flue shall be used as a sewer or drain ventilator. All vent pipes shall be of galvanized wrought iron.

32. If application be made for sewer connection to any building in which the drains or plumbing are already installed, a permit to connect will be granted if such work is found to be in accordance with these regulations. If not, such alterations or additions shall be made as the sanitary inspector or other official may direct.

33. The medical health officer, sanitary

inspector or other official of the board of health or committee of health, shall have the right and shall have access to enter upon or into any premises at all reasonable hours for the purpose of examining and inspecting any plumbing or drainage work, in order to enforce compliance with the provisions of these regulations.

34. All drainage or plumbing work before being covered or inclosed, shall be subject to test in presence of the sanitary or plumbing inspector, who shall arrange with the contractors the time for so doing within two working days of notice given. All roughing-in work shall be subject to the water test, fixtures to smoke or air test, and when the test is satisfactory, the inspector shall, if required, issue a certificate to that effect. When defective pipes are discovered, they shall be replaced by sound pipes, and any other defect of work or material made good before another test is made. All material, labor and appliances necessary for making such tests shall be furnished by the contractor executing the plumbing work.

tests were employed to prepare working drawings for the first group of buildings and the general plan for the future growth and development of the institution.

Buildings Complete.

This initial group of buildings is now complete. The official opening took place on September 25. This new school is of especial interest because its plan is somewhat unique. No other single institution of importance is devoting its whole energies to the type of work which Wentworth Institute has selected for its field. Its aim is to reach trades and to train young men to be foremen and superintendents in building construction and in manufacturing industries.

The Plumbing Department.

The plumbing department will be equipped with about 48 benches and special department for running cast iron drain pipe, vent pipe, etc., a number of small rooms arranged in tiers over one another, which will make possible the complete installation of fixtures, such as would be found in the ordinary dwelling house; and in addition there will be in the plumbing department a considerable floor space set aside for the testing of plumbing systems, studying the syphonage of traps and the other essential principles of sanitary engineering that the competent, intelligent plumber should be familiar with.

Public Buildings.

A new armory is to be built at Sarnia, Ont.

Knox Church, Saskatoon, will build a new edifice.

A new town hall is to be erected at Canora, Sask.

A new school building is under contemplation at Carlyle, Ont.

A \$25,000 postoffice building is to be built at St. Lambert, Que.

Knox Presbyterian congregation, Calgary, are to build a new church.

The site has been purchased for a new \$25,000 theatre at Nanaimo, B. C.

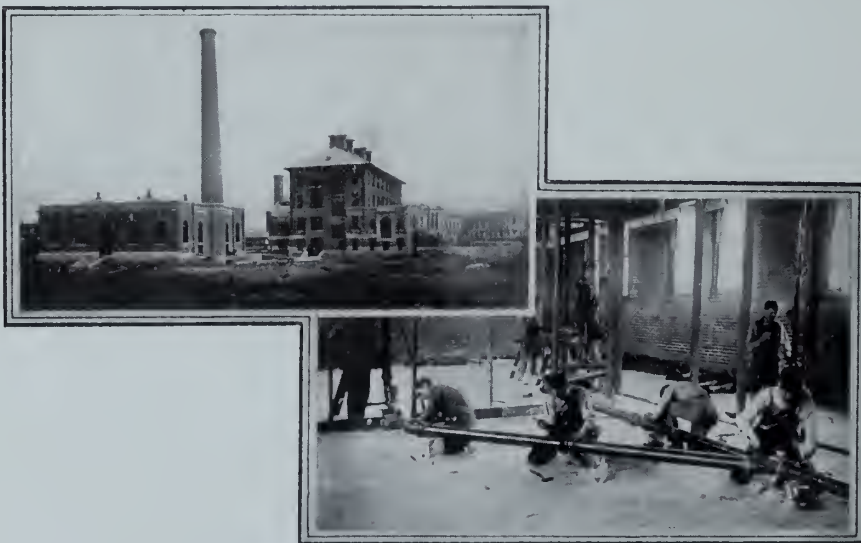
A permit has been granted for a \$125,000 addition to the General Hospital, Vancouver.

An eight-room school is to be built by the Board of Education at New Westminster, B. C.

The congregation of the First Methodist Church, Hamilton, Ont., are planning to erect a new church to cost about \$100,000.

Building permits for the city of Winnipeg for August, 1911, amount to \$1,913,000, as against \$1,457,800 for the same month last year. The total for the eight months has now reached \$13,281,650, as against \$12,419,500 of 1910. The number of buildings covered by this amount are 3,318.

Institute Started on Millionaire's Bequest; An Important Plumbing Department



A View of the Building Already Completed—Men at Work in the Interior of Institute Building.

BOSTON, Mass., Sept. 20.—An opportunity for young men to train themselves to be efficient workers in trades requiring skill and intelligence, is now afforded as a result of the bequest of the late Arioch Wentworth. He had taken a great interest in the cause of technical education, and had determined to devote the greater part of his large fortune to the cause. By his

will, something over \$3,500,000 has been made available to endow a school whose purpose is "to furnish education in the mechanical arts."

The Board of Directors of Wentworth Institute, as the new school is to be called, have conducted an investigation for several years to determine the most suitable type of educational scheme to adopt, and about two years ago archi-

The Relation of Sanitation to Public Health

The Wonderful Work Done by the Sanitary and Heating Trades Toward the Prevention of Disease Demonstrated at the International Hygiene Exhibition—Interesting Interview With Dr. J. F. Honsberger, Canada's Representative.



The Exhibition Poster

Berlin, Ont., Sept. 20.—The importance of proper sanitation, heat and ventilation in respect to public health was most thoroughly demonstrated at the International Hygiene Exhibition, held in the "Grosser Garten," at Dresden, from May to September. Dr. J. F. Honsberger, practising physician, of this city, attended the exhibition as the official representative of the Canadian Government. On his return he granted an interview to Plumber and Steamfitter and gave a very comprehensive review of the more important phases and results.

The exhibition was decided upon eight years ago and the intervening time has been devoted to active preparations. The "Grosser Garten," forty acres in extent, was devoted entirely to exhibits. Practically all countries were represented and the cost of collection and preparation was something over two millions of dollars.

The main theme was Prevention. The motto of the exhibition might well have been "an ounce of prevention is worth a pound of cure." By means of a wonderful series of models, it was demonstrated that health can best be conserved and disease combated by improving conditions of life and thus preventing disease. So completely was this aspect allowed to predominate that no medicines were shown and nothing of a purely curative nature was demonstrated.

The progress of man, from the cave-

dwelling age to the present era of elevators, electrical push-buttons and porcelain baths, was shown. It was made convincingly clear that the gradual mastery of disease had kept pace with the improvement in man's daily environment—his home, his business quarters, his personal habits and food, even his clothes. It might be remarked, in passing, that on the question of dress, man—but not woman—had shown a great deal of wisdom of late. In days gone by men encouraged sickness by donning garments poorly designed to protect them from the cold and wet. To-day they prevent disease by garbing themselves in clothes which are warm and comfortable, even if they do lack the elegance of the days of slashed doublets and silken hose. Woman, however, has replaced the uncomfortable head dress and hoop skirt by the modern "rat" and "hobble."

Improvements in Home.

The exhibits included a series of models, representing the gradual evolution of human habitation and the improvement in sanitation. Man's first lodging was a hole in the side of a hill. The exhibits did not show him habitating the top of a tree, as all contentious topics were studiously avoided. To his cave home there was but one entrance, which served the triple purpose of door, window and chimney. Then he graduated to the mud hut age, where conditions were practically as bad. As time advanced he was found in a succession of habitations, each one slightly better than the one preceding it. The stone castle of medieval days stands out prominently, but the romantic minded, who dream of the "good old days," would

hardly have appreciated the dark, damp rooms, the filthy, reed-strewn floors and the foul, disease-breeding odors.

The series carried the visitor right up to the luxurious and healthful home of to-day, with its elaborate heating system, perfect sanitary appliances, well-considered ventilation and its electric lights. It was demonstrated that the conditions under which some of the people, at least, live nowadays were such that prevention of diseases followed.

In the matter of sanitation, it was shown that the plagues of medieval days were due to lack of sanitary precautions. People lived in houses with no ventilating, looking over dark, foetid passages, which were named, by courtesy, streets. Garbage and waste matter was allowed to collect in yards and alleys. Stenches arose in the crowded sections of the cities. Is it any wonder that the "black plague" swept every country periodically in those days? One could not pass before the exhibits devoted to this phase without realizing the wonderful work that the sanitary engineer has done. The improvements he has effected and the changes he has brought to pass in home conditions have been a great factor in the fight against man's most persistent and implacable enemy, disease.

The same can be said of those who have brought heating and ventilation up to their present advanced stage. The well-warmed and healthfully-ventilated home is a rampart against disease.

Advance in Science.

The rapid advances being made in the science of heating—for a science it is—were amply demonstrated by the exhibits of continental manufacturers. As the eighth International Heating and Ventilating Congress was held at Dresden in connection with the Hygiene Exhibition, a great many authorities gathered there from all countries and discussed topics of vital import. In describing some of the exhibits, the Ironmonger says: "From the point of view represented by the Congress of Heating and Ventilation, no building in the grounds claimed so much attention as that known as No. 54, which is practically reserved for the exhibits of the Associated German Makers of Heating and Ventilating Apparatus. Easily first in point of variety is the firm of Rud. Otto Meyer, of 23 and 25 Pappelallee, Hamburg 23. Apart from boilers the firm have ar-



The Royal Quarter of Dresden, as seen from the River Elbe.

ranged in a sunk recess in the pavilion a pair of full-sized ducts with a return end. Herein are installed complete runs of pipes, which are exhibited with sectional insulation expansion pipes, and specials showing methods for negotiating doorways. All these are erected on wall brackets which represent improvements on the methods described in a previous note. In the 'Far Distance'



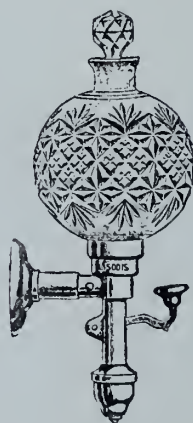
Dr. J. F. Honsberger, Canadian Representative at the International Hygiene Exhibition, Dresden.

plant the brackets have ugly sharp corners and are built in the wall. Messrs. Meyer use two channels blocked out from the wall and spaced apart, on which the brackets can be adjusted so as to provide for a rise or fall according to the work. Moreover, the ends are nicely rounded and have flanged recesses in which the ball-supported carriages move as the pipes contract and expand. Thus the fitting is snuggler than the old form, but equally safe against the liability of the carriage to work off. A further feature is the provision of a ball-socketted clip on the under side of some of the brackets to carry small mains or condense pipes. As an instance of the packing proposed for long runs of pipes, one main was wrapped with (1) kieselguhr in mortar form, (2) asbestos rope wound spirally to afford a $\frac{5}{8}$ -in. air space, (3) tinfoil, (4) canvas, (5) a layer consisting of a waste silk product, (6) asbestos paper, and, finally (7), a painted canvas. One can imagine this was for what might be called *carte blanche* work. In another part of the building Messrs. Meyer had a full-sized installation showing a modern plenum system. Working from left to right the first chamber was fitted to the inlet air duct and provided with a coke screen about 7 feet square

by 9 in. thick. The water spray was disposed over a grid of pipes carrying 16 nozzles, which delivered the water away from the coke, on to which it was carried, after being further atomized, by the incoming air. This detail was held by some of the visitors to be a good feature. In the next cell the principal fitting was the radiator, over and through which the washed air passed into a concrete mouth, to which the fan was connected next door. Smooth running is ensured by making the connection with a closely-woven canvas joint, which device was adopted again on the delivery side of the fan between the outgo and the uptake shaft."

Sanitary Fittings.

There was a wide variety of sanitary appliances shown, including some novel and extremely useful ideas. For instance, one German firm, Hers Netzer, of Höchst-on-Main, showed an improved water-waste preventer, which they have called the "Netzera." It is claimed that the Netzera is not only silent in flushing, but also in filling. A special feature is the arrangement of bells, one above the other, the ingoing water being introduced through the angular space formed by the two parts, an arrangement which probably has a good deal to do with the extremely silent filling of the apparatus. An interesting adjunct to the equipment of the bathroom is the "Liso" soap-delivering vessel. This is made in a number of styles, and appears to be of French origin. The soap employed is liquid, and is contained in



a glass vessel supported either on a stand or a bracket (Fig. 1). The valve may be opened either by pressure of the finger or in some cases by a movement of the foot on a small treadle. In any case the predetermined supply of liquid soap falls into the palm of the hand, and is then used in the ordinary way.

Drainage and Water Supply.

Another interesting feature was the series of models and exhibits of civic drainage systems and water supply systems. The adequacy, or inadequacy, of

these systems has much to do with the health of a community.

"It was interesting to note," stated Dr. Honsberger, "the gradual evolution of sewerage and waterworks systems. We, in Canada, are not behind the older countries in this respect. I feel safe in asserting that the sand filtration water system that we have here in Berlin, Ontario, cannot be excelled anywhere."

A Pride to Canada.

The particular phase of disease prevention which took Dr. Honsberger to Dresden was that of national quarantine. Canada's exhibit in the British building consisted of a small model of the quarantine station at Grose Isle—the eastern wicket to the Dominion, through which all newcomers to the country must pass. Dr. Honsberger was in charge of the exhibit and gave lectures every morning on the Canadian system of quarantine. Our methods were shown to be more thorough than in other countries, and the exhibit, as a result, attracted favorable attention. In the course of his lectures, the doctor allowed enthusiasm for his native country to show itself so markedly that not a few of his auditors caught the infection. As a result, Canada will benefit to the extent of a number of new citizens. One young man, who had been lured hither by the eloquence of Dr. Honsberger, arrived in Montreal a few weeks ago, with the intention of making his home in this country.

TO LOCATE IN WINNIPEG.

The Winnipeg Industrial Bureau reports that negotiations have practically been completed for the establishment of a Canadian factory in that city by the T. Mueller Mfg. Co., of Decatur, Ill. Representatives of the firm recently made a tour through the west and visited a large number of cities and towns with a view to selecting a good location for a branch factory. The announcement from Winnipeg is the outcome of this visit.

News Briefs.

The contract for the plumbing, roofing and metal work on the new Athletic Club, Windsor, has been let to Pennington & Brian. James Purser is doing the heating.

Important changes are to be made at the Victoria Hospital, London, Ont. Tenders are to be called for new plumbing and for lavatory accommodation in the servants' quarters.

The Day Hardware Co., Red Deer, Alta., have added a plumbing department and a tinshop to their business.

A building is to be erected at Saskatoon for the Y.W.C.A. It will cost \$30,000.



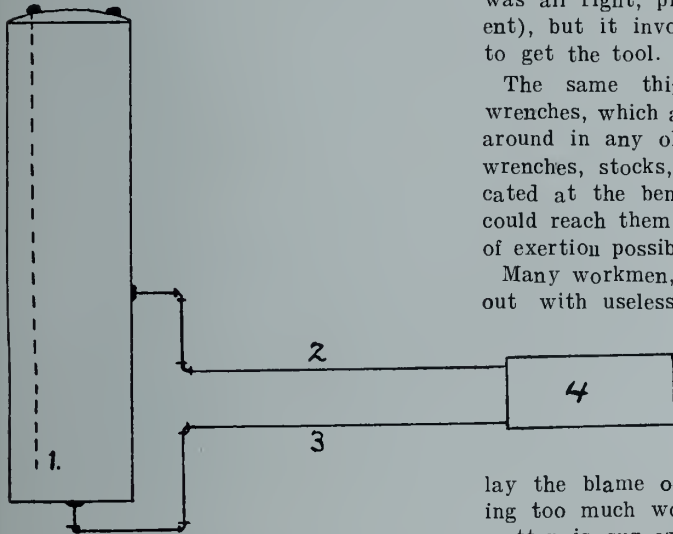
The Question Box



Subscribers are Urged to Send Questions to be Answered, or to Comment on Letters Published. Descriptions of Jobs Done or Shop Kinks are Also Invited.

RANGE BOILER COLLECTS SEDIMENT.

Editor Plumber and Steamfitter:— I have a job that I was called on to fix, and found it in the condition that the accompanying sketch shows. It would seem that the party did not know his business. The drop tube was too long, as shown by figure "1," pipes "2 and 3" were about six feet long and trapped, and there was no



manner provided for drawing off the water from the range boiler at the bottom. Of course there was rusty water in the range boiler, I changed the position of the stove, bringing it much nearer to the range boiler, thus shortening the pipes between the two, put on a draw off cock at the bottom of the boiler and saw that there was no traps in pipes "2 and 3," and the job now works well. I also shortened the drop pipe marked "1,"

Toronto, Sept. 20.

L. C. H.

GETTING MORE SPEED ON THE WORKS.

Editor Plumber and Steamfitter:— I have made quite a study of the way the men work on a plumbing and heating job, and from my observations I conclude that a lot of time is lost from the unnecessary motions that they go through. Take the simple matter of

cutting a thread on a piece of pipe. The average plumber or fitter does not give a hang just where his stocks and dies may be located. I have seen them kept on the floor, on the "off" side of the bench, or leaned against the side of the bench, where it would be necessary to take three or four steps to reach them and then the same number of steps back again. The mechanic wanted them kept in one place (which was all right, provided it was convenient), but it involved an extra exertion to get the tool.

The same thing will apply to the wrenches, which are many times thrown around in any old manner. Now the wrenches, stocks, etc., should be so located at the bench that the workman could reach them with the least amount of exertion possible.

Many workmen, I find, tire themselves out with useless exertions, and then

lay the blame on the boss for expecting too much work. I find that if the matter is suggested to a reasonable workman in the right spirit, he will not take offence. Show him that it is for his benefit that you make the suggestion, and do not go at it and tell him that he must do this, that or the other thing. Prove to him how much easier he can do the work by following some of your suggestions, and get him interested in seeing if he can not improve on your ideas, and you will strike the right method, and you will find that the jobs do not come out with the little losses on the time figured, that so many times cut out the profit on the job figured.

G. S. C.

A PIPE FOR CIRCULATION.

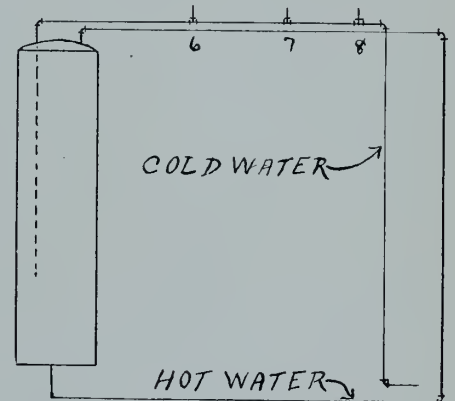
Editor Plumber and Steamfitter:— I wish that you would show in the questions and answers some idea of a pipe run from the range boiler for the purposes of getting hot water more

quickly than the ordinary manner of running a pipe separately to the faucet from the boiler.

Montreal

J. HOPKINS.

We give sketch showing the cold and hot water connections from the range boiler. If connected from a tank and



with a light pressure, the cold water pipe might hold air, and so at any one, or all if necessary, connections to the fixtures might be run on the cold water pipe at points "6, 7 or 8." The course of the hot water pipe will be seen readily. This is, of course, a general sketch showing the idea and the connections to the faucets that it is desired to run the hot water pipes to, can be taken from most any point, although the preference can be given to making the connections nearer the range boiler.

—G. C. H.

A shoe factory is to be built at Brampton.

An isolation hospital is to be built at Winnipeg.

A \$30,000 building is to be erected by the Herald Western Co., Calgary.

Specifications are being prepared for a waterworks plant at Saskatoon, Sask.

A new city hall, to cost about three-quarters of a million is a possibility at Vancouver.

A by-law will be submitted to the ratepayers of Richmond, B. C., for the raising of \$50,000, for the purchase, construction and maintenance of a waterworks system.

TOPICS OF THE TRADE

GET a number of sanitary and heating men together and the conversation will inevitably drift into topics of peculiar interest to the trade. Successes will be rehearsed and grievances aired. Although much of the conversation will relate to personal experiences with employees and with jobs, the conversation is bound to turn to broader phases of the trade.

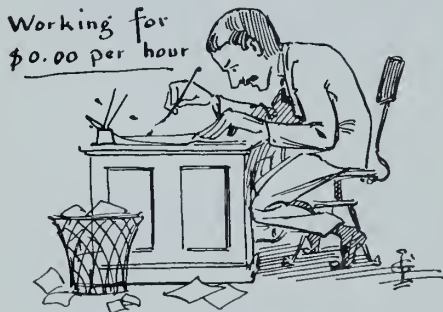
The writer "sat in" at an informal meeting of this description recently. The talk ran on questions relating very intimately to the improvement of trade conditions.

Here are some of the points taken up.

* * * *

"Have you ever paused to consider," asked one man, "the time you waste in figuring on contract work which goes elsewhere?"

The rest said that they had never reduced it to figures, but agreed that the time lost must be considerable.



"I have," continued the first speaker. "This spring I wakened up to the fact that I was devoting a most surprising amount of time to this unproductive work. Time is money, you know. I decided to see just how much money I was losing.

"Well, sir, in the last four months, I have put in three weeks' time figuring on jobs which were awarded elsewhere, and which did not net me one cent. Three weeks—about one fifth of the time, in other words.

"Now, gentlemen, in estimating my overhead expenses, I have always been sufficiently conceited to rate my own services at a salary of two thousand per. That may sound high, but I don't think it is too much, for any qualified man in business for himself. I might not be worth that much to anyone else, but I am worth it to myself.

"Just see what I have lost in money, therefore—in cold, hard cash. If I value my services at \$40 a week, the matter works out like this.

Three weeks.....\$120
Value received..... 000

Out of pocket.....\$120

"I am out of pocket just that much. But the trouble is, how can a fellow stop it?"

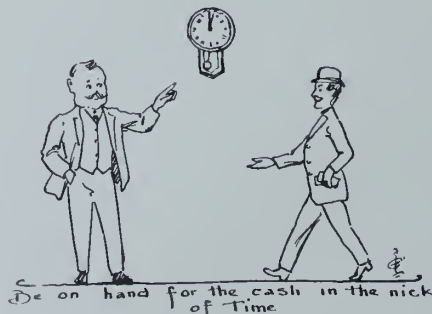
"There is just one way," assented another. "We should charge a fee for figuring. It is done in other lines. Architects charge a fee for preparing competitive plans. Would a doctor or lawyer give information or advice of any kind without sending in a bill? Would they give their time to anything without pay?"

"If we could only do it," assented a third, rather wistfully, "look at the advantages we would have. Architects, builders and owners wouldn't get a dozen men to figure on the same job, if they had to pay a fee to each one of them. It would help to eliminate price cutting."

It would, undoubtedly. All agreed on that score. Would it not be wise if the local associations took this question up and agreed to insist on a fee?

* * * *

"I have been so busy lately," said one man, "that I neglected to collect on a job I had completed until a week or so after the cash was due. The architect gave me a little talking to when I finally went in to get my cheque. 'A —,' he said, 'you'll never be a success in business if you let your money stay out this way? And he was right. I have thought it over and have come to the conclusion that the secret of success rests in proper attention to collections. All the big firms see to it that every cent comes in on time."



This is, in truth, hitting the nail on the head. Prompt attention to collections has many advantages. It relieves the head of the firm of a large share of the financial worry which is always more or less his share. It does away with a part of the possibility of loss.

It is harder to collect an account which has been outstanding for some time than when it first comes due. And it becomes harder all the time. In other words, you have a better chance to collect right on the dot than you have if you let it slide.

The big firms unvariably pay close attention to this matter. Study their methods and you will generally find that they get their last cent out of a job almost as soon as the work has been finally approved. Which is the proper way to do business.

* * * *

"Speaking of collections," put in a young fellow, "why shouldn't we do as they do in other lines? The furniture man who sells on credit puts on ten per cent. for it. He lets his customers know that he (the customer) pays for his credit. It is the only way to do. Our money is valuable and we cannot let it stand out idle."

"I have adopted this plan," he continued. "When I send an estimate to

Mrs. J. M. Smith. Oct 28 - 1911	
in account with	
JAS. H. PLUMMER & Co. -	
18 MAIN ST. W.	PHONE 02002
Cost of job	\$120.00
Plus 10 per cent for time payment	\$12.00
Total	132.00

a man who is likely to ask for time, I state distinctly—this job will cost you so much if you pay it at once, and so much more if you desire time. I explain that this is the only way of protecting my own interests. I intend to mention the interest I charge on my bill heads after this."

As stated before, he was a young man and the older heads in the party were inclined to doubt the wisdom of his idea. "You'll lose your customers," they told him.

"Not much," said the other, confidently. "I do as much business as ever and I'm making more money. I intend to stick to this way."

We hope that he does stick. It will pay him well. It would pay many a man we know, if he would adopt equally sane methods of finance.

* * * *

Then a grievance came to the fore—a real, live grievance. It involved a



matter, by the way, which should be investigated in every municipality.

It was claimed that the system of plumbing in the average ice cream parlor—if, indeed, it could be called plumbing—is totally deficient in all the points required by law. Many of the ice cream emporiums, particularly the smaller ones, are fitted up by a tinsmith or even by a carpenter and the methods employed are extremely crude.

The accompanying sketch represented the style of many parlors—according to several members of the party, who had looked into the question. A galvanized pipe, connected with the sinks and ice boxes under the counter, bell trapped and emptying into the drain, represents the average system. Only in rare cases are vents provided.

"Such installations are unsanitary," said one more, "and in most cities contrary to law. Why don't the inspectors and the medical health officers get after this sort of thing? I tell you, it is up to the trade, up to each one of us, to start an agitation along this line."

There can be no doubt that the average ice cream parlor has poor facilities for the removal of drainage. On the other hand, all will agree that the need for proper facilities is imperative. Think of the thousands of drinks and ices served in the course of a week and the chance of infection from the unsanitary surroundings. If any place needs

to be "above reproach" it is the ice cream parlor.

This is a matter for every local to take up. It is well worth looking into.

• • • • •

Finally the conversation drifted to the subject of help.

"Do you know," said one man, "that we can be of great assistance to each other in the matter of help? Smith you know is located just around the corner from me and, up to a year or so ago, we were sworn enemies. I thought that Smith was the most rascally fellow that ever cut a job to the bone, and he thought the same of me. We never spoke; sometimes didn't even nod when we met. Then we both joined the association and got to know each other a little better. I found out that Smith had some good points, wasn't a bad fellow at all, in fact, he began to warm up a little on the score of my own likeable qualities. We have become almost friends. To-day Smith called me up over the phone and said he needed a fitter bad. I was not too busy so I loaned him one of my fitters. We often do little things to help one another that way, and I tell you it beats the other way all hollow."

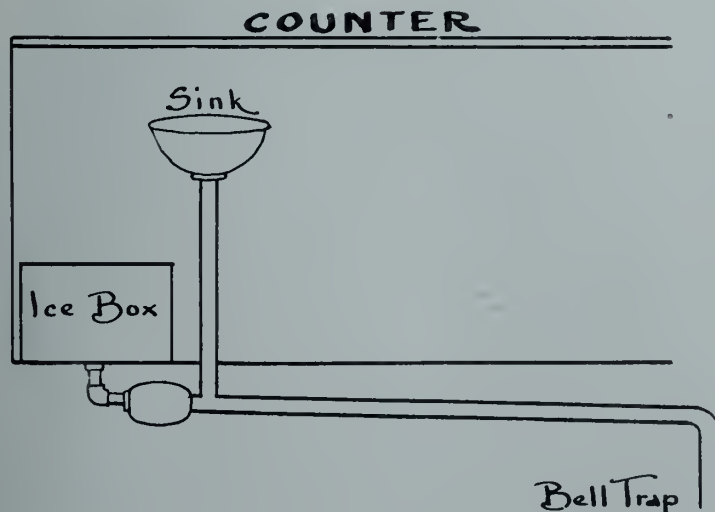
Moral:—Get to know the other fellow. It will help you and the other fellow too.

A Phase of Technical Education

A supposed grievance of a young man who was refused permission to attend the plumbing classes at the Applied Science Department of the University of Sheffield has been aired in the Sheffield newspapers, says the Ironmonger. It appears that the applicant, who is employed in a factory to prepare tin linings for boxes used in the export trade, desired to learn something of the plumbing craft in order that he might increase his usefulness to his employers by executing plumbing repairs about the works. The prospectus of the Sheffield Plumbing Classes distinctly states, however, that instruction at these is limited to journeymen plumbers or apprentices to the trade. The classes owe their origin to the local master plumbers, who promoted them with the object of providing technical education to those who are learning the craft or practising it. Their point of view is that plumbing cannot be learned at classes, and that the instruction given there merely supplements the experience gained in the workshop. They consider, in brief, that while technical education cannot make a plumber, it can and does greatly add to the capability and value of the shop-trained plumber. The employers are not anxious to extend the existing competition with men who can do good sound work by increasing the number of those possessing a smattering of the craft, and they think that this would be the result of opening the classes to all and sundry. The suggestion that the exclusion referred to is an instance of trade-union influence does not hold good, since the regulations governing the classes were mainly drawn up by the employers. It is also a fact that the master plumbers of Sheffield provide money prizes for competition by the students, and they have sacrificed both money and time in the effort to make the scheme of technical education successful.

WILL INVESTIGATE.

Toronto, Sept. 25.—The unsanitary conditions found in a large number of public schools here is likely to result in a wholesale campaign for the improvement of conditions. Charles Doherty and F. Maxwell, of the firm of Maxwell & Johnson, who have been assisting Judge Winchester on his special investigation into the work of the Building Department of the Board of Education, have concluded their work and are now preparing their reports to submit his Honor.





18 Sizes and Styles of the "KING"

*Nearly four hundred installed—Two Boiler Plants running
agencies selling it—The "KING" Boiler*

Toward the end of last winter we took this space to tell our friends in the trade that we were going to get out a new boiler—that the extent of our business made it necessary for us to handle a boiler of *our own manufacture*, and that we believed conditions in the trade warranted—demanded—the production of a new boiler embodying up-to-the-minute heating knowledge and keeping abreast of the progress made in heating practice during the past few years.

On these pages we show photographs of 18 models now in stock. Numbers 1 to 5½, including half-sizes, high and low bases, 4 and 5 sections. Before this paper reaches its readers we will have perfected and tested two more models and

added them to the list. The company to have ready before the end of the

January last the "KING" Boiler with a lifetime's experience in the establishment of a new standard in Canada. It is a complete working range of boiler that will take some beating.

We do not, however, claim or make it possible, on our part requi

STEEL AND RAIL





Boiler Now Ready for Shipment

*a third under construction—Four branch offices and seven
ord for its first eight months of existence.*

f about 30 sizes and styles we expect
only in the form of an idea, coupled
business, and a determination to es-
ter Boilers. To have produced prac-
since then and to have *sold and*
and ready for use, is we think a re-

he credit for this performance. To
estment of an immense sum of money

in plant equipment and services, but the loyal and enthusiastic support we have
had from the trade since the first boilers were on exhibit in our Toronto plants and
showrooms have endorsed our belief that the public was ready for a new boiler, and
has made us more confident than ever that we are on the right track in our efforts
to produce a boiler absolutely without a peer on this continent.

In conclusion we wish to say that while we anticipate no difficulty in filling
fall orders promptly, yet we will necessarily be a little handicapped until our
new St. Catharines plant is ready, and that we will appreciate your placing your
orders from now on as early as you conveniently can.

ATION, LIMITED





An Exterior View of the Business Premises of McKelvey & Birch, Kingston.

A Sketch of an Old Established Canadian Firm

The Gradual Growth of the Business of McKelvey & Birch, Kingston, has Been Due to the Adoption of Progressive Methods—A Model Workshop and Show-room.

ONE of the most progressive sanitary and heating firms in Canada is that of McKelvey & Birch, Kingston. Their establishment is conducted, in many respects, on model lines and a description will, therefore, be of interest to all members of the allied trades.

McKelvey & Birch have reached their present position by keeping wide-awake to trade opportunities. They have not been content to "let well enough alone" but have been continually on the lookout for new avenues of activity and new ideas. As a result they now do a big business in general hardware and have a tinshop department which keeps a large number of men employed regularly. In addition, they have taken advantage of the increasing popularity of metallic and prepared roofing and are doing a big business in that line of work. They now have 60 employes in all. Of that number, 35 are in the plumbing and heating department and the rest are dis-

tributed through the hardware, tinning and roofing branches of the business.

As will be seen from the accompanying illustration, the firm are using two stores. The larger establishment to the left is used for hardware, and the plumbing showroom is in the store to the right. This is found to be a satisfactory arrangement, as it enables them to keep the two departments separate and distinct.

The plumbing showroom is attractively laid out. The old idea that a plumber does not need to bother about his business premises has been exploded by the experience of such firms as McKelvey and Birch. The success of their business has been due, in some degree at least, to the fact that they have always "kept a good front." Attractive windows and neat, well-stocked showrooms are trade magnets, with a drawing power which should not be underestimated.

The showroom contains a good selection of all sanitary appliances. A stock of bathroom accessories is prominently displayed along the wall. It is indeed strange that so many plumbers neglect the opportunity to deal in goods of this description. McKelvey & Birch have found that the demand for wall mirrors, glass-holders, towel racks, and all goods of that description has become a most valuable feature. This has been the unvarying experience of firms which have taken up and featured the sales of accessories.

The Work Shop.

In the rear of the showroom is the workshop. Here an unusually complete equipment is found. In addition to a large number of smaller machines, the equipment includes a pipe-cutting machine, which cuts up to 8-inch wrought iron pipe. The firm have several portable machines which are used for out of

PLUMBER AND STEAMFITTER

town work. The bulk of the pipe used is cut in the shop, the men sending in their requirements from the places where they are engaged.

McKelvey & Birch do not confine themselves to work in Kingston. They undertake many large contracts in surrounding places and at present have the following contracts in hand: Napanee High School; Bank of Montreal, Cornwall; office of Parmenter & Bullock, Gananoque; evaporating plant for G. W. McMullen, Picton. Among the larger contracts on which they are now engaged in Kingston are an extension to the Hotel Dieu Hospital and the new Queens College building.

History of Firm.

The firm of McKelvey & Birch is one of the oldest established in the country. They first opened their doors to the public in 1865. It is noteworthy that the original members of the firm, John McKelvey and Samuel Birch, are still actively directing the business. At the start, they conducted a general business in plumbing, tin-smithing and hardware. A small shop at 186 Wellington Street served as the first home of the firm. It was not long, however,

before the business outgrew the original premises and it was found necessary to move to more commodious quarters. In 1869 they moved to a larger store at 71 Brock Street. This in turn became too small and five years later the place was enlarged to meet the growing demands of the business.

In 1885 the building was entirely reconstructed. The plumbing and steam-fitting end of the business had grown to such proportions that the wisdom of separating that department from the hardware was recognized. Accordingly the store next door was acquired and fitted up as a plumbing showroom. For another decade this arrangement served. The growth of the business had never ceased, however, and about six years ago it was discovered that still further expansion had become imperative. The old buildings were torn down and a modern building reared its head in the old familiar place—a building constructed along modern lines and peculiarly adapted for the varied nature of the business carried on by the firm. A total floor space of 29,064 square feet was provided. It will readily be seen that every facility was thus provided for conducting each department of the business

on a broad and progressive scale. The reconstructed building has been occupied ever since and has been found none too large.

The exterior view of the premises shows a number of the employees of the plumbing department. None of the men employed on out of town contracts are included in the group.

A UNIFORM CODE.

Henry D. McCormack, C.E., writes in *Domestic Engineering* as follows:

In the August 19th number of "*Domestic Engineering*" there is quite a discussion of that very important subject, the size of soil-pipes, pointing out the absurdity of requiring 4-in. branch pipes for the discharge of waste from water-closets having trap passages ranging in size from $1\frac{1}{2}$ in. to 3 diameter, and averaging about $2\frac{1}{4}$ in.

Within recent years there is a decided movement towards the use of smaller pipes, Washington, D.C., being a conspicuous example of a city which permits 3-in. soil-pipes under certain conditions in residences.



The Handsome Showroom of McKelvey & Birch.



POINTS ON HEATING

By
CHAS. H. DENISON



A WASTE STEAMFITTERS SHOULD CORRECT.

Coming home from "down town" the other day, I observed clouds and clouds of steam issuing from the exhaust pipe from the boiler room of a manufacturing establishment. Of course this was in the summer time, but the same thing was true during the winter months, for I have seen it happen in the cold weather.

The great waste shown in such a case (and there are hundreds and hundreds of such instances all over the country) can be better understood when it is stated that in exhaust steam at atmospheric pressure, there are over 900 British thermal units per pound that can be used in heating. To be more exact, the number is stated as 966. Now with a pipe leading directly to the atmosphere all this heat in the steam is lost to one's use. Many heating contractors pass manufacturies every day, and have for years, and never asked themselves the question, "Can't I find some way to convince the owner of the plant that he is deliberately throwing away good money every hour in the day for about seven or eight months in the year?"

Thus, all over the country a large amount of money is being lost, and a large amount of money stands ready to be rushed into the coffers of the heating trade in the form of labor and sales if the contracting steamfitter will but wake up and get busy on the job. It is another one of the undeveloped specialties that is being constantly overlooked by many in our trade and business, and but proves that "none are so blind as those who WON'T see."

The exhaust steam need not, of necessity be wasted in the summer time, for it can be utilized in heating various liquids which are used. In connection with the heating proposition, if it is found that the supply of exhaust steam would be insufficient to supply the demand, at all times, a connection can be made whereby live steam can be introduced into the heating system, thus giving an ample supply to tide over the time when more heat is required than could be supplied from the exhaust steam.

Thus there exists no possible excuse for the manufacturers not making use of the exhaust steam thrown away, in some manner and the consequent resulting job to some contracting steamfitter.

Know All About It.

One thing about this business (and the same applies to several other plumbing and heating propositions that might be mentioned) is that the fitter sometimes plunges blindly into the business before he is well prepared to execute it. To go to a manufacturer and propose such an installation without knowing fully just how to put it in, or what it is going to do when in, is bad business. Perhaps that is one reason why some of these jobs are not the success claimed for them. The fitter did not know his business. If you have no catalogue of the different systems, postage stamps are selling at the same old price as last year, and one on a letter of inquiry will bring to your desk some valuable information pertaining to the system you require points upon.

Don't be satisfied with knowing about one kind. Get information concerning all of the "top notchers." You might run against some party that could give you some hints about some system that you were not posted upon, and you would feel cheap to have a "citizen" giving you points upon your own line of business.

Competition has become so keen, the costs of manufacturing have been cut at every point, that, in order to make things pay, every possible waste must be eliminated in the manufacturing world to-day. Hence in this proposition of utilizing the heat that is thrown away, one has a business talking point that will command the attention of the owner.

Even if he should fail to be attracted at the first approach, it does not signify that you will never land him. In some lines of business the canvasser will keep after a possible customer for years, and if the customer is "worked" from the central or the head office, he may escape by death only from a certain amount of attention.

The writer of this article is not putting out these efforts in the interest of

any particular system, and will mention no names, as it is not necessary. The effort is to show the heating contractor that here is a paying proposition, that he is not working to the extent he should, that the waste is unnecessary, and that it exists in hundreds of places where it should not, and that it is up to him to remedy the matter both for his own benefit and for the good of others.

Throwing Away Dollars.

I should not be at all surprised if every one who reads this article could go out from the shop and in less than fifteen minutes' walk land straight up against some manufacturer who is throwing away many dollars each year through the pipes that carry to the air the exhaust steam in his building.

This applies to small towns and cities also. What are you going to say to such a man? Are you going right up and tell him that he is losing money? If you do, the chances are that you will be sent upon your way in short order. The better way would be to have become so posted that you would be able to show him how he can make more money, for while the knowledge conveyed is the same in each case, it makes considerable difference to the average man just how the idea gets into his head.

No one likes to be told that they are losing money, for it conveys the impression that they are bad business managers. Every one is standing on tip toes and with ears extended to hear how they can MAKE MORE CASH.

Until of late, the human nature problem, in selling heating apparatus, has not entered the steam or hot water business to any great extent. Many a heating contractor can install the apparatus to the king's taste, which is, I presume, exclusive; but many a heating contractor makes a sad mess of matters when he attempts to sell heating apparatus, and therefore there is a chance for a considerable amount of study along the lines of salesmanship. Big firms pay out good money in training their men to sell goods. Why should not you, at least study the matter? It would even pay you to take some lessons if you have to make the time to do it.

Heating Cobourg's Large Public Buildings

Steam Gravity System has Just Been Installed by M. Millward & Son, of Port Hope—Four Mains Enable Different Parts of Structure to be Heated Independently—Dual System of Boilers, Though One Will be Sufficient for all but the Most Extreme Days.

When it was determined to have a new heating system installed in the joint Cobourg town hall and the Northumberland and Durham county buildings, the clause was entered in the specifications that operations must be finished by October 1st. That meant only three months in which to prepare for and complete the work. The other clauses of the specifications made it clear that the installation would not be without difficulties, so many of those tendering submitted their estimates not without misgivings as to their ability to be through on scheduled time. The councilmen interested also feared that the plant might not be ready for use when required, but their alarm was without cause, for M. Millward & Son, of Port Hope, had the boilers in, the piping installed, and the successful tests made by September 3. They had undertaken the task exactly two months before.

Four Mains Installed.

This heating plant must be numbered among the largest installed in Canada this year. To enable the heating of different parts of the building independently four mains had to be installed. That required much more piping than would otherwise have been necessary. In all more than two miles of coiling was used, and the radiators, which number 92, give, all told, 8,000 feet of radiation.

Every steamfitter would be interested in this gravity system steam heating plant. But there will be few steamfitters who will be able to make an inspection, therefore, a description of the work—though necessarily somewhat unsatisfactory—will be well worth giving.

The piping is arranged on the loop system, running through the building's three storeys and through the basement. It is absolutely necessary that the cellar should be well heated, for there are located the cells, and, of course, it is desirable to make things hot for the prisoners.

How Saving is Effectuated.

Two Safford boilers will supply the heat units, which are conveyed through the boiler valve into the different mains. Here is where the great saving comes in, also the difference between this system and one which might be installed in an office building of similar size. One circuit of piping may here be used,

while the rest lie idle. Should court be in session, for instance, the main supplying the radiators situated in the court room and the legal chambers will be turned on. Otherwise it will be disconnected. If a concert is to be held in the auditorium the main serving the radiators there will be connected. If the auditorium is not in immediate requisition, no heat need be expended in that part of the structure. The offices, indeed, are the only rooms which demand heating daily—those and the "cooler" below.

Naturally the installation of these four systems within one larger system, rendered the expense of the work somewhat larger than it otherwise would have been. And yet the \$5,250 which the plant cost cannot be considered high, and the quadruple system, while increasing the immediate outlay, means a great future saving, for it more than cuts the coal bill in half.

In the auditorium alone, for instance, there is 15,000 feet of radiation. If that were in use daily the waste of fuel would be tremendous.

Twin Valve System.

As the system is arranged, George Millward, who had the work in charge, declares that one boiler will be quite capable of supplying the heat necessary for all but the exceptional days. The twin valve connections will enable the

caretaker of the building to take advantage of this to keep the coal bill still lower.

The boilers are not of the exact same style, one being a 48—6 and the other a 48—7. "That 48—7 boiler will be able to supply all the mains," remarked Mr. Millward, "but there are a few days each year when the wind makes heating difficult. Then the dual system of boilers will come in useful. I do not think there will be many such days, though," he added, "for the building is a splendid one—one of the best in which I have ever worked."

The Canadian West Lumber Co. will build a lumber mill at Comox, B. C., at an outlay of about \$60,000.

Foley Bros. & Lawson will erect a four-storey warehouse in Edmonton, Alta.

Richard Green will build a \$10,000 store at Gilbert Plains, Man.

The Grasselli Chemical Co., of Cleveland, have decided to locate in Hamilton, Ont., and will erect a \$100,000 factory there.

Alterations to the extent of \$20,000 are to be made to the Union Bank building at Halifax, N. S.

The city of Montreal is building a fireproof machine shop, which will cost \$60,000.



Joint town hall and county buildings at Cobourg, in which a fine steam heating plant has just been installed.

Faulty Sanitary and Heating Work

Weird and Wonderful Specimens Discovered by Members of the Trade—Contrivances for Cheapness were Common in Days Before Inspection Became Thorough.

TAKE a tour of inspection through any section of any city and examine the plumbing and heating in every house encountered. The result will probably be an eye-opener. Some truly weird and wonderful contrivances will

connected to a 2 inch tin pipe in the basement. This pipe was connected with a tin hopper in the corner of the basement as shown in the plan. THE WASTE WATER FROM THE SINK WAS USED TO FLUSH THE HOP-

Any reader who can beat it is requested to send along his information.

A Heating Installation.

But cheap and faulty work is not confined to the sanitary branch of the trade. The steamfitter will frequently see fearful exhibitions of heating work. Here is one.

Editor, Plumber and Steamfitter.—

I was called in last week to fix up a heating job which according to the owner, "wasn't worth a hang." The family had passed the winters in a partially frozen state for the past six years. It seemed that one radiator on the ground floor did not heat up at all and another one never got any better than lukewarm.

The accompanying sketch will show the reason why. The connection to the radiator on the left had been made by tees off the side. The natural result was that the radiator remained stone cold and the two coils on the first floor which were heated through the risers were always very warm. In my opinion that radiator never had a ghost of a chance. The use of by-pass tees might possibly have made things better but the only sure way would have been to make a direct connection with the boiler.

Now for the radiator on the right of the sketch. Tees had been taken off the top and trapped with $1\frac{1}{4}$ of trap on 5 feet. The result was that the coil was never better than lukewarm.

The owner has instructed me to remodel the whole job. It will take in the neighborhood of \$300 to make that job work so that the ground floor will be comfortably heated this winter.

Toronto, Sept. 14.

A. P.

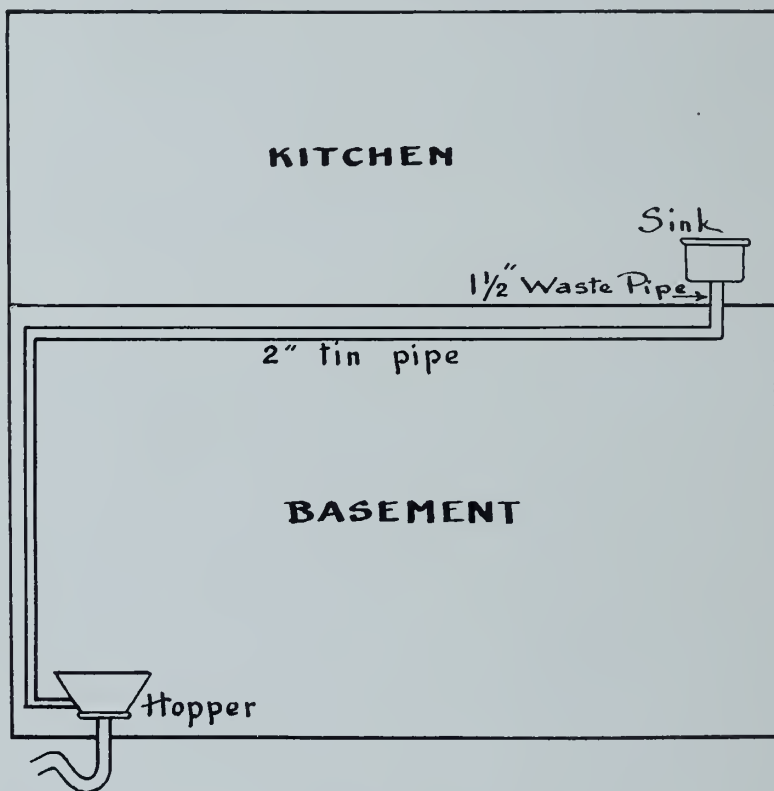


Figure 1.—Specimen of Cheap Plumbing Found in Toronto House.

be found. In fact, a large percentage of the plumbing work found in the poorer class of houses would be most unmercifully condemned if put to any test. Much of the work which comes under this classification was put in years ago before plumbing inspection because very thorough. Some of it, however, has been put in under the noses of the inspectors.

Many glaring specimens of bad sanitary work have been brought to the attention of Plumber and Steamfitter in the past but nothing to beat this one.

Ingenuous, But—

Editor, Plumber and Steamfitter.

Dear Sir.—Talk about your "skunk" plumbing, but I have just found one piece of work which caps anything I have ever seen. I was called in to remodel a job in a house on Broadview Avenue and this is what I found. By the accompanying sketch, you will see that there was a sink in the kitchen—a sink with no tap, mind you. An inch and a half waste pipe from the sink was

PER. The job was not vented. It had been in for a number of years I was led to understand.

Can you beat it?

Toronto, Sept. 2.

A. F.

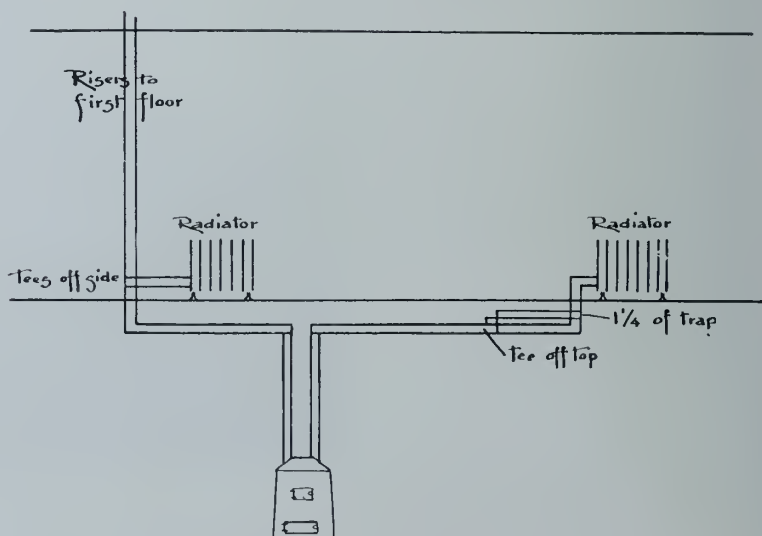


Figure 2.—A Faulty Heating Job.

"Take a Bath Once a Week or Go to Jail"

Famous Order Which Enabled Aurora, Ill., to Clean Out the Slum Sections—Landlords Were Compelled to Put in Baths and Proper Sanitary Appliances.

THE sanitary trade is more interested in the question of slum improvement than any other class. Knowing the evil effects of unsanitary conditions from constant contact with the same, the sanitary worker feels the grave menace that the slum sections of all cities have become. He appreciates to the fullest the necessity of cleaning out these disease-infested spots;

It will be interesting, therefore, to learn how the slum evil was eliminated in Aurora, Ill. This city had rather more than its share. The percentage of foreign inhabitants in Aurora was very large. The foreigners lived in crowded sections, generally on the principle of thirty or forty to a house. They absolutely lacked all conveniences and lived for the most part in a condition of

4. Windows must be kept open in all bedrooms.

5. Yard must be kept free from all rubbish, slops and refuse—this breeds disease.

6. Keep your homes as free from flies as possible.

7. Inmates of all houses must not spit on the floors.

8. All persons are requested to bathe at least once each week.

9. Bed clothing must be thoroughly aired at least once each week.

10. Water closets, sinks, wash bowls, etc., must be kept strictly clean.

11. Place garbage in regulation garbage cans and set them out on day of collection.

The above rules must be strictly ob-

ment. Landlords were compelled to install sanitary fixtures. Commenting on the effect of his order, Dr. Reder says:

"It may surprise every one even more than the issuance of the orders when I say that there have not been any prosecutions from failure to comply with the orders. And, while there was grumbling at first, most of it came from the greedy Americans who rented lodgings unfit for even pigs to those poor, ignorant people. The people themselves were willing enough to keep clean once they were told how, but the landlords were not willing to provide water, wash bowls and bath tubs for them. And this, too, when they were getting ten times more revenue from this broken-down, unsanitary, vermin-reeking property than from up-to-date better-class dwellings amply fitted with modern plumbing appliances. For, were not as many of these poor beings housed in one shanty as of the better-off class in twenty times as many houses! And these poor people had to pay by the week sums almost totaling the monthly rents of the better houses in the better parts of the city. Even then the greedy landlords whined at putting in the cheapest of sinks."

Dr. Reder's stand was worthy of emulation. Hold the landlords responsible for sickness arising from unsanitary buildings, says "Modern Sanitation." Then they, in turn, after being compelled to furnish sanitary plumbing and make provisions for bathing, will compel their tenants to keep up their end in the fight for cleanliness. For is not cleanliness the David to fight the Goliath disease?

Other cities might well adopt the "one-bath-a-week-or-jail" plan.



A typical foreign home in Aurora before the order went into effect—Dr. Reder, who made the order and effected a great reform.

unmitigated filthiness. The situation was so serious that Dr. A. F. Reder, the health officer, decided that drastic steps would have to be taken. Accordingly he issued his famous "One-bath-a-week-or-jail" order. It read as follows:

NOTICE TO HOUSEHOLDERS AND PROPERTY OWNERS.

By order of the Board of Health, City of Aurora, the following rules and regulations pertaining to health must be observed under penalty of the law:

1. All rooms must be kept clean and well ventilated, especially sleeping rooms.

2. Floors must be thoroughly swept each day, and scrubbed at least once a week.

3. Not more than two persons may sleep in a small room and not more than five in a moderate-sized room, size to be determined by Health Officer.

served, and any violation will be prosecuted to the fullest extent of the law.

The City Health Officer will visit your places each week to see that the rules are enforced.

By order of the

Board of Health,

Dr. A. R. Reder,

Health Officer.

Frank Michaels,

Chief of Police.

And the People Bathed.

The results were remarkable—and immediate. The slum sections of the city showed an immediate improvement and the health returns indicated a rapid decrease of sickness. Fewer unclean people were seen on the streets. It was quite apparent that the bathing rule was being observed.

The greatest result of all was achieved with respect to property improve-

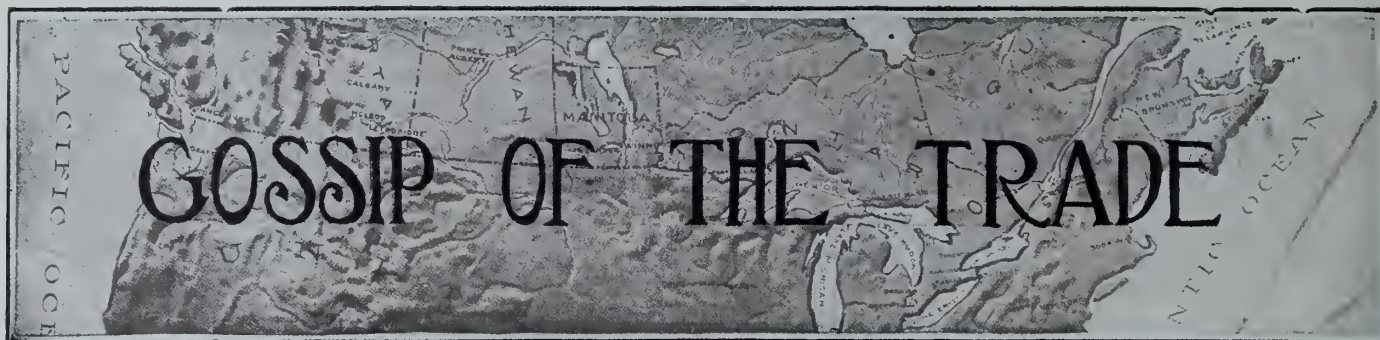
METAL SITUATION.

Lead—If the situation in lead last week was serious, this week it has become very critical. If there is any lead in this city, the writer is unaware of the fact. All jobbers seen reported that their stocks were absolutely wiped out and that, try as they would, they could not supply their customers.

Tin—This metal is doing better. Tin never does remain on the downward path long—the London syndicate sees to that. The price quoted here to-day is 43c, an advance of one cent over last week. It is believed that the market will mend from now on and that the price will reach, or nearly reach, the high level of a month or so ago.

The B. A. Mowat Co., Campbellton, N. B., are to build a three-storey business block, 80 by 35.

The Stuart Co., Montreal, are planning to build a \$40,000 bakery at the corner of Mance and Laurier Ave.



Funds for Fountain.

The citizens of Burlington, Ont., are raising by popular subscription the sum of \$300 for the erection of a modern sanitary fountain.

Giving up Tinshop.

J. A. Ray, Galt, has disposed of his tinsmithing business to Mr. Prior, and will in future devote himself exclusively to the furnace business.

Goes to Edmonton.

G. H. Rix has severed his connection as a tinsmith with M. Wallace, Wetaskiwin, and is going to Edmonton, where he has secured a good position.

A Small Fire.

A blaze broke out in the tinshop of Ross Bros., Fraser Ave., Edmonton. The fire brigade got the flames under control before any serious damage had been done.

Was Defeated.

James Richards, who ran as the labor candidate in East Toronto, was among the defeated, as A. E. Kemp, the conservative nominee, carried the riding by a large majority.

Going Over Steam Plant.

D. D. Kimball and J. H. Brown, of New York, are in St. Thomas for the purpose of going over the city's steam heating system, and making a report as to the advisability of continuing it as at present laid out, or to suggest improvements.

Broke Gas Main.

While the road roller was being used on Broadway, St. Thomas, the wheel sank into the ground and punctured a pipe belonging to the Natural Gas Company. The gas immediately shot up and took fire from the fire box, enveloping the machine in flames. Dave Brockbank, the driver, jumped, but had his left hand severely burned in trying to extinguish the flames.

Lasted Forty Years.

John T. Wilson, Toronto, sheet metal worker, has an interesting exhibit in the shape of a piece of cavetroughing re-

moved after forty years service. In August, 1871, Mr. Wilson did the tinning work on a house which had been removed from the site of the old York Street school and taken to a lot farther down on Richmond Street. A week or so ago, Mr. Wilson was called upon to replace the cavetroughing. He found that most parts were still in a remarkable state of preservation, despite the strenuous wear of forty years.

Local Again Organized.

The local association in Toronto has again been organized, and it is believed that it is now on a better basis than ever. The larger firms are falling into line, and in a short time the association will probably include the best men in the trade in Toronto. The meetings are being well attended. The new officers are:—President, Frank Maxwell; vice-president, H. G. Waterman; secretary, G. F. Frankland; treasurer, Tom Maxwell. The executive is made up of some of the ablest men in the city.

Compulsory Installation.

A despatch from Edmonton, Alta., reads: Compulsory installation of sewer and water is to be carried out by the city in accordance with the powers obtained at the last session of the legislature. It has not been carried out hitherto, owing to the fact that the necessary plumbing supplies have not been on hand. The commissioners have now decided to place the necessary orders. Tenders for the plumbing in connection with the extensive scheme of compulsory installation were received by the board, and referred to the waterworks superintendent. The contract will possibly be awarded before the end of the week.

Fixing Leaky Taps.

The Toronto Star says:—"The waste of city water still goes on. Tests at an unmetered home for children showed that taps were left running all night, apparently without object. Some people think that by so doing they flush their sewers, but they really do nothing of the kind. 'Seventy-five per cent. of the leakage is in the homes of Toronto,' said Engineer Fellowes to-day. It would almost pay the city to have a staff of

inspectors who would put washers on leaky taps free of charge. In many cases the leaks are small, and people will not go to the expense of getting a plumber. The loss in water, however, is more than it would cost to put the tap in shape."

Sanitary Inspectors in the Pulpit.

The twenty-sixth annual conference of the Incorporated Sanitary Inspectors' Association, which opened at Yarmouth on September 4, was preceded on September 3 by a service at the Primitive Methodist Temple entirely arranged and conducted, including the playing of the organ, by sanitary inspectors.

Mr. J. T. Quinton, of Liverpool, in his sermon, welcomed the National Insurance Bill as a true and earnest desire to alleviate the lot of the poorer section of the community. The objects of the public health movement were to make growth more perfect and more vigorous, decay less rapid, and death more remote. As a member of the Church of England he regretted that its lay members were shut out from pulpits such as that in which he was speaking.—Ironmonger.

Sanitary Magic.

It may be that the feat attributed to the plumber in the subjoined anecdote from Answers is impossible outside the realms of the imagination, but within them it is a singularly pleasing achievement for every one but the family on whom it was practiced.

"You're wanted," said the small boy.

"Who wants me?" demanded the plumber.

"Number 132—the house you've just come from."

"Do you think I can work all hours of the day?" retorted the plumber.

"You'd better come," persisted the small boy stoutly, "or it'll be too late. Ma's got hysterics, and pa's gone nearly mad, and—"

"Look here, sonny," asked the plumber, "what's up?"

"Well, I think you've connected the wrong pipes, or something," replied the boy. "Anyhow, the chandelier in the parlor is spraying like a fountain, and the bathroom tap's on fire!"

News of the Manufacturers and Wholesalers

EXTENSIVE IMPROVEMENTS.

Port Hope, Sept. 18.—Extensive additions are being made to the Standard Ideal Company's plant here. A \$6,000 steel and concrete power building has just been erected, while five new buildings, to cost \$15,000, are being constructed over the new enameling furnaces. Work upon these will be completed about November 1.

These operations once finished, a \$50,000 warehouse and office is to be erected on that part of the factory site which adjoins the town. This building will measure 350 x 80 feet. The work upon it, the president of the company says, will be completed by the beginning of the new year.

A new brick and steel building—the third to be devoted to the construction of tubs—has lately been finished, while at the present time work is going on upon new sand blast cleaning rooms.

The whole plant is being equipped with electric appliances, which will enable the company to take advantage of the power shortly to be supplied the town by the Seymour Power Company.

OFFERED FOR SALE.

The plant and stock of the Standard Fitting and Valve Co., Guelph, have been offered for sale.

FOUNDRY AT WINNIPEG.

L. L. Anthes, of the Anthes Foundry Co., Toronto, leaves next week, for Winnipeg to complete arrangements for the factory that is to be built there next year. A site has been chosen in St. James, facing Saskatchewan avenue.

The plans for the building have not yet been drawn, but it will be bigger than the factory in Toronto, and a large staff of men will be employed. Construction work will not start until the spring.

A NEW BIB.

The English firm of Frank Love Limited have put out a new line of



bib cocks, which are to be known as the "Ezepour" bib. The pattern is a

self-contained, non-splashing tap with the filtering gauze permanently attached to the outgo by a screwed nipple of the same metal as the body and other parts.

POROUS PARTITION FILTER.

The Brownlow Filter Co., Manchester, England, have donated an earthenware water filter to the Saskatoon Board of Trade. It is constructed on the porous partition principle.

A NEW TOOL RACK.

J. H. Williams & Co., Brooklyn, have devised a rack, by the use of which Vulcan tools can be displayed. In dimen-



sions, says Iron-Age Hardware, the rack is approximately 4 ft. high and 4 ft wide. It is made of strong black pipe of different diameters, aluminum painted and is of self-supporting design.

TO MANUFACTURE HERE.

It is understood that the Pittsburg Water Heater Co. are making arrangements to start manufacturing in Ontario. A provincial charter has been secured.

THE CANADIAN RIGHT.

The James Morrison Mfg. Co., Toronto, have secured the right to manufacture the Ryan ball-cock for the Canadian trade, purchasing same from the Exeter Brass Works, Exeter, N.H. Manufacture will be started at once.

SECURE CANADIAN AGENCY.

The Gurney Foundry Co., of Toronto, have secured the Canadian agency for the Bishop, Babcock & Becker pump, which is used in connection with vacuum jobs. W. A. Schulte, the sales manager for Bishop, Babcock & Becker at

Cleveland, recently visited Toronto, and closed arrangements by which the Gurney Co. secure Canadian control of the pump. A booklet entitled "Best Heat" is soon to be distributed.

GENERATORS IN ENGLAND.

It is stated that the Honeywell Heating Specialty Co. have arranged with Charles Winn & Co., Granville Lane, Birmingham, England, for the manufacture of the Honeywell generator by that firm in England.

VENTILATION CHAMBER.

The N. O. Nelson Manufacturing Co., St. Louis, have devised the special sanitary equipment shown in the accompanying illustration. It is known as a utility and ventilation chamber. It is described as follows in the Metal Worker:

"This chamber affords opportunity for placing the pneumatic flushing tanks where they are not accessible to the school children. It is provided with openings at the top from which air is exhausted. The closets used are of a type which have seat vents, although not a portion of the closet bowl itself. These are provided to make it possible not only to vent the closet bowl, but also the room in which the vents are used. This vent is located above the flushing rim and cannot be flooded in case of stoppage of the outlet. The closet bowls are of the standard type and of the various heights adapted for the juvenile or more advanced school. They are of the seat action type so that as soon as it is in use the valve is opened allowing water to flow into the



flushing tank and compress the air in it so that immediately on the seat being released the contents of the tank are discharged with the force of the compressed air to insure a thorough flushing of the closet as well as scouring all the surface."

PLUMBING AND HEATING MARKETS

MONTREAL.

Montreal, September 30.—The prosperity of the whole country is given as the cause for the difficulty which the manufacturers and jobbers alike are experiencing in supplying all the soil pipe radiators, and lead pipe which are wanted. Satisfactory as the heavy demand is, it is yet causing trouble. Plants are being worked to their utmost, and yet the product is not sufficient. Orders can not be filled at once, and all that can be done is to see that each man ordering has enough to meet his immediate needs.

Enamelware too is wanted in large quantities. Indeed the whole trend of the market is toward large orders—much larger than were received during the same period last year.

Enamelware.—With the completion of so many buildings all at one time the demand for this line has grown greatly. Apartment houses, private homes, and public buildings have to be equipped with conveniences within the next few weeks. Plumbers are busier than they have been for some months—and it has been a good summer for them too.

Not only are new buildings being fitted with enamelware, but in houses which have stood for years old fittings are being replaced by those of more modern pattern. A great amount of repairing is reported.

Boilers and Radiators.—The demand for enamelware and for boilers and radiators usually goes hand in hand. The same cause lies behind the need for all. So, at this season, jobbers report difficulty in getting enough coiling to fill their orders. "I have bought all I can get," said one man, "but I can not fill every order promptly." While boilers, too, are wanted in large numbers, the supply of them seems more nearly to meet the demand.

Soil Pipe.—Here is where the great shortage is felt. The building boom has brought a great demand, and the supply is not at hand to meet it. At one of the large local houses it was stated that 50 tons of iron are being used for soil pipe and iron fittings every day. That means perhaps 35 tons of the finished product. A large amount, but much too small to enable orders being promptly filled.

Discounts quoted are generally as last week, that is: Heavy pipe, 70 and 10; 7 and 8 inch pipe, 50; light pipe, 60 and 10; fittings 75.

Lead Pipe.—The advance in the price of lead to 15 per cent. discount, will, it is expected, bring a rise in the price of lead pipe. The demand for the pipe is large, and the supply hardly great

enough to meet this. Lead of all kinds is scarce.

Iron Pipe and Fittings.—Here the largest orders perhaps are for $\frac{1}{2}$ inch galvanized pipe. The factories which produce this are being hard put to it to fill their orders. But the demand for all iron piping and for fittings, is heavy. "We can supply our customers and that is all," remarked one sales manager. "The demand is most satisfactory and speaks for the prosperous condition of the country." Discounts generally quoted are: Discounts on malleable fittings, 40; cast iron, 60; flanged unions, 65, nipples, 75 and 10; malleable lipped union, 65 per cent.

Solder.—A steady demand with prices remaining firm is reported here.

Metals.—Orders are being received steadily. There is no rush, just a steady, satisfactory, fall business. Prices remain steady.

Tin.—For some time prices have fluctuated here. Another change came Tuesday of this week, when in London a £5 drop was recorded. This was short lived and the market has now returned to its former condition. There is little doubt that this vacillating market was caused by the operations of the English Bulls who for eighteen months have cornered the tin market, and who, by this last move, prevented competitors bidding at the Dutch government's monthly sale.

TORONTO.

Toronto, Sept. 29.—Business is extremely brisk. Reports from the manufacturers and jobbers are to the effect that they are finding it a difficult matter to meet the demand in some lines. Members of the trade report that they are pretty well rushed and that it is extremely hard to procure men. This is particularly true in Toronto, where qualified men are scarce at the present moment.

A feature of the market at the present time is the scarcity of lead. As a natural result of this shortage, the price of lead pipe may be advanced shortly.

Enamelware.—The demand has been heavy during the past two weeks and this condition still obtains. The trade is rather busier than usual at this stage of the season, if the size of the orders received is any criterion. The sales manager of one concern showed a bundle of orders which he had received on one mail, all from points in the provinces and all containing orders for enamelware. "I am pleased to say," he remarked, "that the class of goods in demand, judging from this batch, is of the best grade. We find that there

is a distinct trend toward quality goods nowadays." Prices remain firm.

Boilers and Radiators—September is always a big month in the heating trade, as the bulk of business now being done amply attests. Orders are pouring in for immediate requirements. "We shipped out a carload yesterday," was the report received at one house, "and we will be making more shipments in a day or two. We have never had a busier September." That the boiler trade has been better during the past month than in September, 1910, is conceded by all manufacturers. As good a record during October is now anticipated.

There is, of course, a correspondingly good demand for radiators. Prices are reported to be firm.

Soil Pipe.—The heavy demand reported in last issue has been maintained steadily since. The factories are working overtime to keep up with the business, and shipments are heavy. The sales manager of one house to-day stated that they were practically sold out and had so many orders coming in that they anticipated some demand in filling them. Quotations on medium and heavy soil pipe are: 70 and 10. On the 7 and 8-inch sizes, the discount stands at 50 per cent.

Lead Pipe.—The lead situation is so critical that an advance in the price of pipe may occur at any time. Lead has been advancing rapidly of late and it is only a matter of time before the price of pipe is put up in accordance. There is a steady demand. The prevailing quotation is 27½c. Lead waste sells at 9c per lb., and caulking lead at 4½c. Traps and bends at quoted at 50 per cent. discount.

Iron Pipe and Fittings.—The scarcity of $\frac{1}{2}$ -in. galvanized pipe continues. Various reasons are advanced in explanation of the shortage, but the fact remains that galvanized pipe in that size is extremely difficult to obtain. The factories are striving hard to turn out enough to meet the demand, but are not yet in a position to get ahead of their orders. The demand is considerably heavier than in past years. Quotations are as follows: Cast iron fittings, 65 to 70 per cent.; malleable fittings, 37½ to 40 per cent.; cast iron bushings, 70; malleable, 67½; nipples, 75 and 10; headers, 60 and 10, although some quote 67½ and 70; flanged unions, 70; malleable-lipped unions, 67½ per cent.; galvanized pipe, \$6.18; black pipe, 1-inch size, \$4.54.

Solder.—Prices are high, and, as tin is showing a tendency to get back to its high level again, there is every reason to believe that solder will remain firm. Wiping, in the common grades, sells at 21¼c, the better grades as high as 25¼c. Half-and-half is quoted at 27½c.



THE DEMAND FOR OUR National Low Down Closet and Imperial Twin Jet Closet

combinations is growing rapidly. Proof of their good qualities. Send in your orders, we will take care of them. Full line of Plumbing Supplies in stock.

The National Plumbing Supply Company, Limited

115-117-119 Adelaide St. West, TORONTO

IMPERIAL



Hot Water Quick Opening Radiator Valve.

"Miller" Hot Water and Steam Radiator Valves

The bodies and bonnets of our **Hot Water Quick Opening Radiator Valves** are made in one piece, thus having a great advantage over other valves, as it leaves one less joint for possible leakage. The cone-shaped Disc prevents sticking.

Our superior **Steam Radiator Valves** have very low seats and a high lift of Disc.

We manufacture both valves from $\frac{1}{2}$ " to 2", with or without union, also union elbows.

Every valve is thoroughly tested and has an unlimited guarantee. They are built for service. Ask your jobber for them.



Steam Radiator Valve.

MILLER LIMITED, - LONDON, CAN.



KERR Steam and Hot Water RADIATOR VALVES

are past the experimental stage.

They set the standard for high quality in material and finish and stand the many tests of use.

Note the seats in Kerr's New Pattern J.D. Radiator Valves which insure perfect drainage.

The Kerr Engine Co., Ltd.

VALVE SPECIALISTS

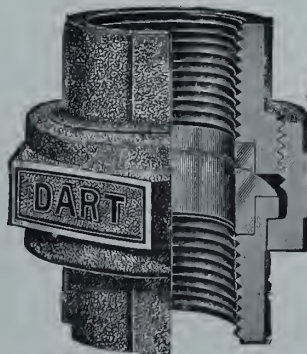
Walkerville - - Ontario

THE BRONZE TO BRONZE GROUND JOINT THAT CANNOT LEAK

DART UNIONS

Stay tight until deliberately loosened and make joints time after time, for the bronze faces of the joint cannot rust or corrode. First cost the only cost.

Add these Unions to your stock. They are trade winners, satisfaction givers. Use them, they will save you time and expense. Your jobber has them.



Dart Union Co.,
LIMITED
TORONTO

Condensed or "Want" Ads.

BUSINESS CHANCES.

WANTED—A Plumber or Steamfitter to buy a half interest in Plumbing and Heating Business. Middle west. Box 514, PLUMBER AND STEAMFITTER, Toronto. (20)

PLUMBING, Heating and Tinsmithing Business for sale in best town in Canada. Satisfactory reasons for selling. Established six years. Stove business in connection. Apply Box 592, PLUMBER AND STEAMFITTER, Toronto. (19tf)

POSITIONS WANTED.

ENGLISHMAN, over four years' Canadian experience, desires position as stock and time-keeper. Knowledge of plumbing and heating. Advertiser 12a Hanover Street, Montreal. (19)

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ACCURATE COST KEEPING IS EASY if you have a Dey Cost Keeper. It automatically records actual time spent on each operation down to the decimal fraction of an hour. Several operations of jobs can be recorded on one card. For small firms we recommend this as an excellent combination—employees' time register and cost keeper. Whether you employ a few or hundreds of hands, we can supply you with a machine suited to your requirements. Write for catalog, International Time Recording Company of Canada, Limited; office and factory, 29 Alice Street, Toronto.

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DOUBLE your floor space. An Otis-Fensom hand-power elevator will double your floor space, enable you to use that upper floor either as stock room or as extra selling space, at the same time increasing space on your ground floor. Costs only \$70. Write for catalogue "B." The Otis-Fensom Elevator Co., Traders Bank Building, Toronto. (tf)

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MODERN FIREPROOF CONSTRUCTION. Our system of reinforced concrete work, as successfully used in many of Canada's largest buildings, gives better results at lower cost. "A strong statement" you will say. Write us and let us prove our claims. That's fair. Leach Concrete Co., Limited, 100 King St. West, Toronto.

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THE "Kalamazoo" Loose Leaf Binder is the only binder that will hold just as many sheets as you actually require and no more. The back is flexible, writing surface flat, alignment perfect. It cannot get out of order. No exposed metal parts or complicated mechanism. Write for booklet. Warwick Bros. & Rutter, Ltd., King and Spadina, Toronto.

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ONE of the most successful retailers of late years says: "When a firm advertises in trade papers it is getting into good company. As I pick up one of a dozen of these periodicals here in my office, and glance through it, I find that the best people, the successful firms, are represented in such a way as to reflect their importance in the trade."

Nature has solved the problem of distribution. It uses a multitude of agents to effect the distribution of its products. Nature does not expect every seed to fall upon fallow ground and to take root. But, it achieves a profitable percentage upon its distribution. This is all that an advertiser has to do to reap a profitable harvest on his outlay.



Irregular Pinches! Vulcan Vise

is not alone far superior as a tool for regular pipe and fittings work, but really "the only grip," for objects otherwise out of the question in regular bench vise.

It isn't any bigger than a box of Biscuits, and you can wind up an unfailing grip as easily as you do your clock, but in one-tenth the time.

You get a gripping service within the wide range of from 1 in. to 4½ in. diameters, in one "handful" of tool.

You get an enduring, unbreakable-in-service tool that must in every way confirm the manufacturers' guarantee.

"I wouldn't take \$10 00 a piece for them to-day if I couldn't get another."—Moore.

They won't cost you as much! Consult your dealer.

J. H. WILLIAMS & CO.

Superior Drop-Forgings.

77 Richards St., Brooklyn, N.Y.



DIRECTORY OF MANUFACTURERS

Plumber and Steamfitter receives from time to time, enquiries for the names of manufacturers of various lines. These enquiries come from firms who usually intimate they have looked through Plumber and Steamfitter but cannot find any firm advertising the line in question. In many cases these firms are anxious to secure the information at once. This page enables manufacturers to keep constantly before the trade lines which it would not pay to advertise in larger space.

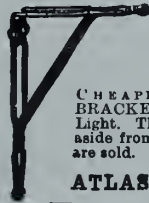
EMERY WHEELS.



Canadian Hart Wheels

442 Barton St. East, Hamilton
Corundum and Emery Wheels
Grinding Machines, Beaver
Oil Stones.

SHELF BRACKETS.



Will Hold Up a Shelf

That's what a shelf bracket's for
For this purpose there can be
NOTHING BETTER, NOTHING
CHEAPER than the BRADLEY STEEL
BRACKET. It is well Japanned, Strong and
Light. The saving on freight is a good profit
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Anti-Splash Tap Filters

The "Galvo" Filter and Water Steriliser
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There's good money in them for hardware dealers.
Write for Prices.

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Wholesale Commission Merchants and Manu-
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OUR POSITION IS YOUR OPPORTUNITY
SASKATOON, WESTERN CANADA

BRONZE POWDERS BRONZE LIQUIDS

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Send us your orders and we guarantee the
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THIS IS THE DAY OF INVESTIGATION

Get in line and let us prove
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GENUINE
Armstrong Stocks and Dies

ARE THE BEST.

Catalogue on request.

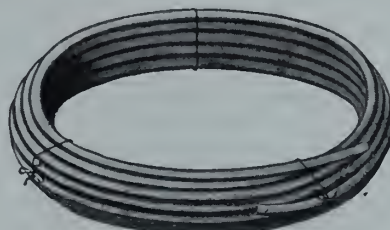


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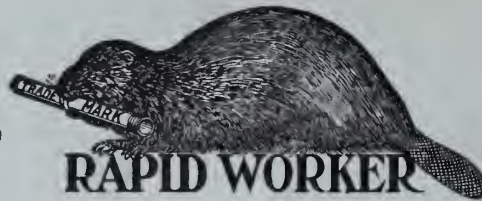
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LEAD WASTE
HYDRAULIC
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CENTRIFUGAL
CAST TRAPS



1-8 to 8 inches
WRITE FOR PRICES

SOLDER
FOR ALL
REQUIREMENTS

The Canada Metal Co., Ltd., FRASER AVE., Toronto



One man with a Beaver Die Stock is worth two or three men with any other Die Stock made.

"Beaver" Adjustable Die Stocks

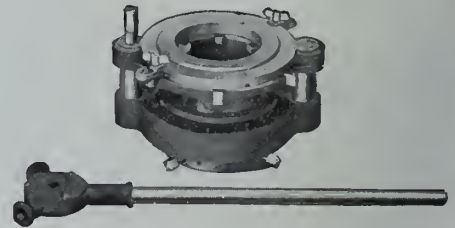
HAVE cut the cost of pipe threading in two because they will thread all sizes of pipe without changing dies. They are built on the receding principle which positively enables one man to thread any size of pipe and produce absolutely tight joints for all work, including hot water. They save the time formerly used up in changing dies and looking after loose parts, and eliminate all of thread-stripping when backing off.



No. 25A, threading 1, 1¼, 1½, 2-inch pipe.
A boy can operate it,



No. 6, threading ¼, ½, ¾, 1 inch, complet

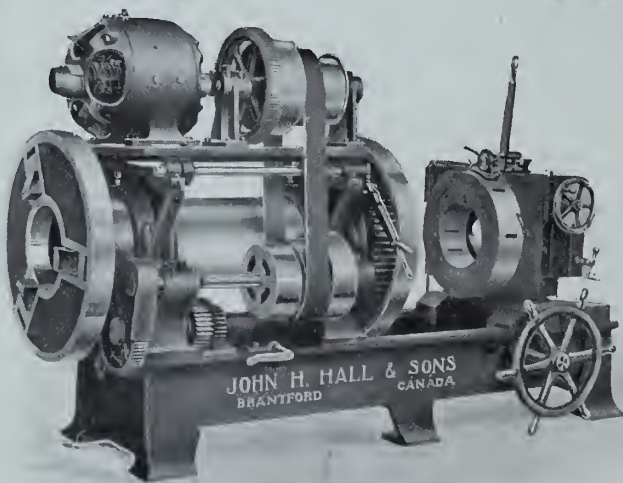


No. 60. Uses two sets of dies. One set cuts 2½, 3, 3½ in. the other cuts 4, 4½, 5, 6 in.; they are inserted without removing any parts.

No loose Bushings or loose Dies on No 25A and No 6, and they cut 1, 1¼, 1½ and 2-inch pipes.
We can furnish a separate set of dies for 1, 1¼, 1½ and 2-inch pipe.

Write us for Illustrated Price Lists.

BORDEN CANADIAN COMPANY,
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Pipe Threading Machines

Belt or Motor drive, all sizes, for the Plumber, the Jobber, or the Mill; also

Double and Single Head Rapid Nipple Machines

Rapid Upright Roller Pipe Cutters

Write us for Prices on Pipe Machines, any size from ¼ to 18 inches

John H. Hall & Sons
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HOUSE HEATING BY STEAM AND WATER

By CHAS. B. THOMPSON

This recent book specially written for those interested in Heating Apparatus and Installation for Houses, giving

Methods of Installing Heating Apparatus in the Home.

Rules for Computing Radiation and Heat Loss.

Graphic Charts Showing Boiler Power and Coal Consumption.

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A remarkable feature of the work is the great collection of diagrams showing the layouts of systems most successfully used in dwellings of different character and size, and including piping plans, radiator location and connections for dwellings, apartments, stores, etc.

265 pages.

268 illustrations.

PRICE, \$3.00.

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this business was started in a very small way. By selling reliable goods and giving all our customers a fair and square service, it has grown to be one of the Largest Plumbing Supply Firms in the trade.

“Scotia” Plumbing Supplies

embrace the products of all the most reliable manufacturers in the trade. We carry large stocks and can generally ship from stock on receipt of order.

Test Our Service with a Trial Order.

Wm. Stairs, Son & Morrow, Limited

HALIFAX,

NOVA SCOTIA

Established A.D 1810



Economy and Safety

IN THE

SOVEREIGN BOILER

Years of experimenting, combined with the use of selected materials and skilled workmanship, has put the “SOVEREIGN” Boiler in a class by itself.

By installing the “SOVEREIGN” you give comfort to your customers at minimum coal costs.

It is an excellent line upon which to rest your reputation. It gives perfect service.

WRITE AT ONCE FOR PRICES

Taylor-Forbes Co., Ltd., GUELPH, Ontario

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Montreal, Que. Taylor-Forbes Co., Ltd., 1070 Homer St., Vancouver, B.C.
W. R. Mathers, 46 Princess St., St. John, N.B. The Vulcan Iron Works,
Winnipeg, Man. The Mechanics Supply Co., Quebec, Que.



ASTORIA

AVOID COMPLAINTS THEY EAT UP YOUR PROFITS

It is annoying after you have finished a job, to have your telephone wire kept hot with the complaints of a dissatisfied customer. This can be prevented by using reliable fittings and supplies on every job. The Morrison Line of Plumbing Supplies are thoroughly reliable. We guarantee every article we sell to be exactly as represented.

In W.C. outfits you will find these lines to be thoroughly satisfactory.

"QUALITY"

Closet Combinations

"Elgin" Washdown

"Simplex" Syphon Jet

"Astoria" Square Back Syphon Jet

All our low-down outfits are furnished with our Patent Combined Ball Cock with Shut-off Cock. This is the simplest and most efficient on the market, with full weight copper lining.

THE

James Morrison Brass Mfg. Co.
LIMITED

Toronto

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..

Ontario

Quality Empire Extra Compression Bibbs

EXTRA Quality Metal Used

EXTRA Workmanship

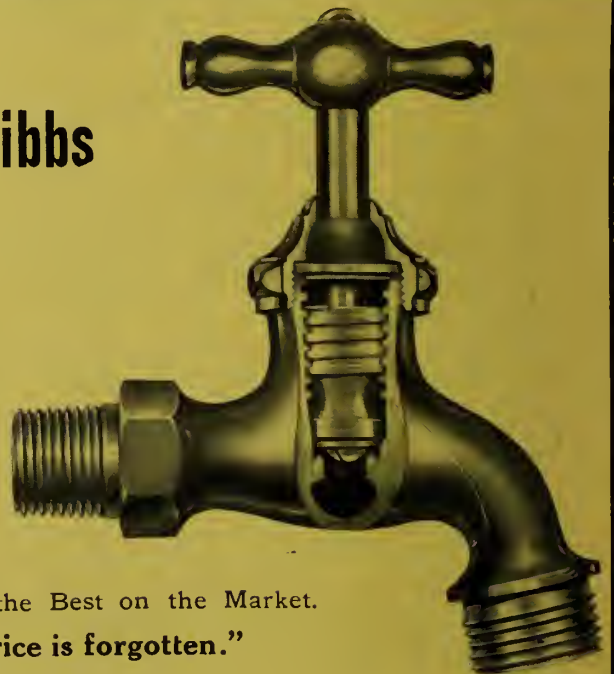
EXTRA Guaranteed

EXTRA Fine Working Parts

SQUARE THREADS

ENCASED SEAT

SPECIAL PACKING



Make the Empire Extra Quality Compression Bibbs the Best on the Market.

"The Quality remembered long after the Price is forgotten."

Our name in full or the letter "E" on everything we make.

Empire Manufacturing Company, Limited, London, Ontario

Manufacturers of the Famous EMPIRE Closets, Absolutely Guaranteed.

PLUMBER & STEAMFITTER

and Sanitary Engineer of Canada

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TORONTO, 143-149 University Ave.
CHICAGO, 140 Dearborn St.

WINNIPEG, 34 Royal Bank Building
NEW YORK, 115 Broadway

Vol. V.

Publication Office : TORONTO, OCT. 15, 1911.

No. 20



COMPANY LIMITED
GENERAL OFFICES AND FACTORIES · PORT HOPE · CANADA



Public Lavatory

Freeman's
HOTEL
Montreal

Entirely composed of
STANDARD
Porcelain Enameled
Sanitary Ware

BRANCH OFFICES AND SHOWROOMS

TORONTO 119 KING STREET EAST	MONTREAL 44 BEAVER HALL HILL	WINNIPEG 76 82 LOMBARD ST
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Beaver Brand

Cast Iron Enameled Ware

Unsurpassed for Pure Whiteness of Color,
Attractiveness of Design, Finish and Durability.

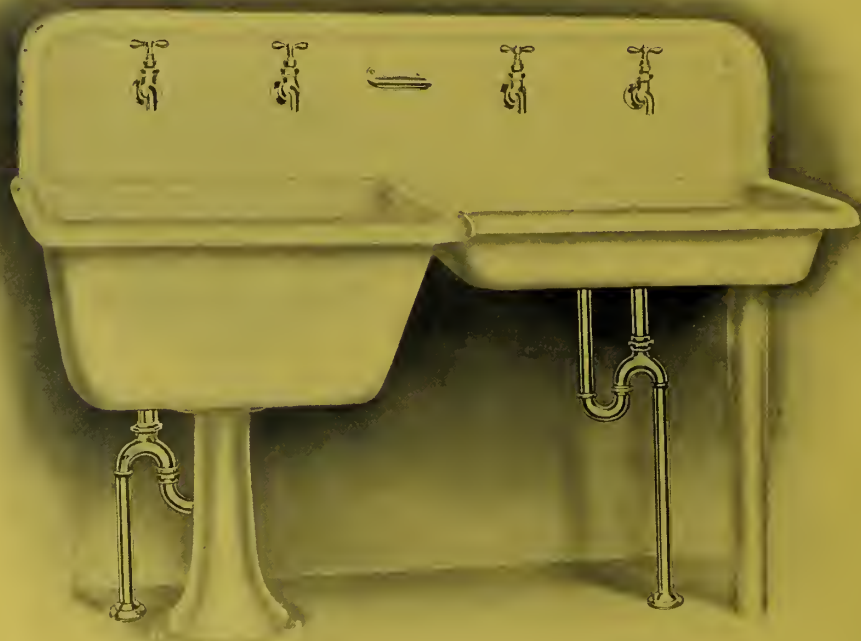


PLATE "D" 357

The above cut shows one of our latest patterns of Roll Rim Combination Laundry Tubs and Sink, with one-piece recessed back, for either left or right hand side.

This new fixture is one of our complete lines of Sinks, Baths, Lavatories, Laundry Tubs, Range Closets, etc., to which we are continually adding new patterns.

Amherst Foundry Co., Limited

General Offices and Factory: Amherst, Nova Scotia

ONTARIO:
Monarch Brass Mfg. Co.,
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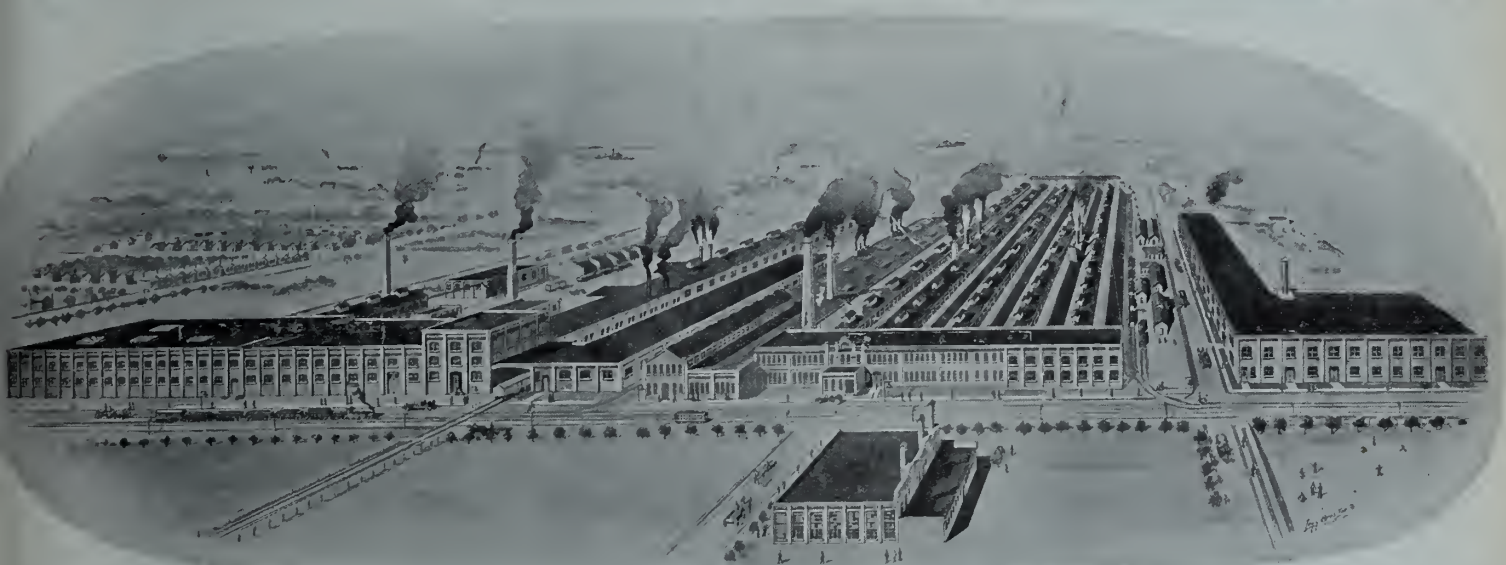
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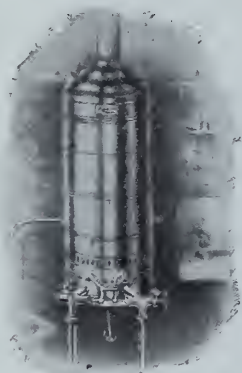
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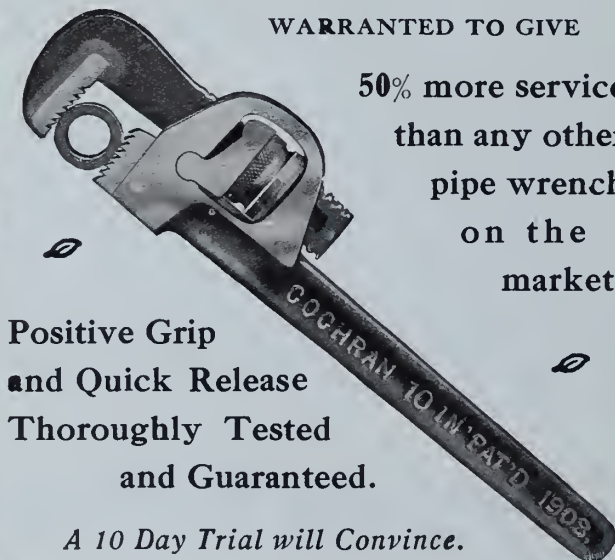
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BLACK and GALVANIZED. SIZES, 1/8 IN. TO 4 IN.

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You can talk across the continent for two cents per word with a Want Ad. in this paper.

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have proved to be of exceptional quality. This is because of the modern machinery and methods we employ for every process of manufacture.

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ters, Sanitary Inspectors, Heating and
Ventilating Engineers, City Engineers,
Boards of Health, Architects, etc.

TORONTO, OCTOBER 15, 1911

A DUTY FACES every member of the trade in Ontario at the present time. The coming convention of the Ontario Society of Sanitary and Heating Engineers will be the most important provincial meeting ever held in that province. There are matters to be considered and new legislation pending which promise to entirely change trade conditions—and the change will be all for the better. If the members turn out strong and help along the good work by their presence and support, it will not be long before the trade will be organized on a footing which will spell great things in the future.

It devolves then on each man to either attend himself or see that his own association or the district where he lives is represented. What is desired more than all else is a representative attendance to add weight to the deliberations and lay the groundwork for the complete membership which, it is hoped, will be built up during the coming twelve months.

Do not leave it to the other fellow to do. Attend **yourself**. You will feel afterward that you have been well repaid for your efforts. And, furthermore, do not leave the question to the last moment. Decide **now** that you are going to be in attendance and make your arrangements accordingly.

AN IMPORTANT STEP has been accomplished in the securing of the Ontario charter. The Ontario provincial body has undertaken a splendid work, involving many radical changes. The change in name to "sanitary and heating engineers" is to be backed up by steps tending to raise the status of the trade and improve the standard of work done. The necessary steps are provided for in the new charter which has been obtained. If the work is carried out to the letter, a new era will dawn in the province. It will be possible to eradicate evils and effect reforms which are quite impossible under existing con-

ditions. The backing of the trade members will be required, however, if anything tangible and lasting is to be accomplished.

NEVER CUT in the plumbing business and the business will never "cut" you.

NEARLY ONE HUNDRED MEN, plumbers, steamfitters, roofers, contractors, architects and others interested in construction work, gathered at luncheon in St. Lawrence Hall, Montreal, on October 4th. They had come to hear Mr. Werner Nygren, of New York, speak upon the vital subject of "Heating and Ventilation." But they had another object in attending. They were there to endorse the action taken by the Directors of the Builders' Exchange in inaugurating these luncheons—these luncheons at which those interested in building and companion lines may meet socially; listen to an expert speak upon a subject of general interest; and all for a nominal expenditure of time and money.

When James Ballantyne, the President of the Exchange, proposed that the luncheons should be held regularly once every two weeks, loud applause bespoke the general approval. There was not a dissenting voice.

Small wonder that this should be so, for these gatherings will offer great opportunities of self improvement, if Mr. Nygren's speech may be taken as a fair sample of those which are to come. He did not pose as an authority. He did not attempt to say the final word. He merely gave a series of mental moving pictures from his own experience, making it so plain that none could misunderstand that what a man installing a heating or ventilating plant must principally depend upon is the teaching of his own experience, and his own common sense.

Mr. Nygren made his hearers think. It is quite certain the speakers who are to follow will accomplish the same great end, and much good will result.

These luncheons, moreover, can hardly fail to improve the good feeling which now exists among members of The Exchange. Long may they be continued!

DO NOT FORGET the date of the Convention—Thanksgiving Day, October 30.

REPORTS FROM all sections of the country are to the effect that collections are good. "Our customers are paying us more readily than for some years," said a stove manufacturer this week, "and there seems to be plenty of money in sight."

A GOOD TIME FOR COLLECTIONS

There can be no doubt whatever that the country is enjoying great prosperity. All industries are busy, confidence is full and unshaken and money is plentiful. People do not seem to be at all afraid to spend and the natural inference is that they will be just as willing to pay where they owe. In view of the easiness of the money situation, the retail dealer should make a determined effort to get in his outstanding accounts. Strike while the iron is hot, is the axiom to work upon. Make collections now when most people have the money to meet them; do not leave it until later in the season when the usual winter retrenchment will start.

AMONG THE FIRST LESSONS learned by the small boy from his fellow small boys is this, that he must not tattle. Tattling is the unpardonable sin in the eyes of the school boy, and in the eyes of men too, for after all school boy etiquette is pretty well the etiquette of the business world. But there comes a time when this feeling of repugnance at the thought of informing is a vice and not a virtue. It seems, indeed, that a number of plumbers are now failing in their duty, to themselves and to their city, by persistently refusing to tell of evil conditions which they encounter.

WHEN INFORMING IS A VIRTUE

A Montreal Master Plumber speaks of some shocking conditions which he has personally observed. Water closets installed in the corners of bedrooms, only poorly constructed wooden partitions separating—water closets, too, that are badly kept. "The people in those bedrooms are sleeping next to the cemetery," remarked this sanitary expert. "Their bed is their coffin."

He believes this to be true, yet he has not informed the health authorities of the bad state of affairs. No. The Health Department has a good number of Inspectors to investigate, he holds. They should find things out for themselves.

But the Inspectors have a large territory to cover. They cannot possibly discover all the conditions which badly need remedying. To a great extent they are dependent upon the public to inform them of evil conditions. And the plumber should be the man most willing to help. If evil comes of evil plumbing, the plumber is blamed. Surely he should not let that inherent aversion to informing deter him from doing a duty to the people as a whole, and to himself and his colleagues.

A NEW issue of four-dollar bills has been put out and unsuspecting men, who have passed them off for ones, are now strenuously condemning the policy of issuing bills of this denomination.

ONE OF THE hardships of the plumber's work, one of those things which detracts from the justifiable pride felt in a job well done, is the knowledge that lack of care

upon the part of the user lessens the effectiveness of even the best work. Good plumbing fixtures will cease to give good satisfaction without good care.

GOOD CARE FOR GOOD PLUMBING

Plumbers have this brought home to them almost daily. Regularly they are called to remedy defects which they find due to carelessness upon the part of the user and not upon that of the man who made the installation. But once in a while they see the reverse side of the mirror. They see a place where fine equipment is well cared for. There is at least one factory in Montreal where this satisfactory state of affairs exists.

Sanitary tiled lavatories have been installed, and over these a man has been put in charge. He attends to the cleaning. He watches that no improper material is put in the water closets. If any harm is done he can name the man responsible. All this, of course, means an outlay equal to this caretaker's wage. But it also means a bill for plumbing repairs, on which cyphers figure to the exclusion of digits. It means good health for the men, and that is the aim of sanitary plumbing.

The heads of this Montreal concern have taken a wise step. Plumbers establishing lavatories in other factories might well cite this example, and urge the management to undertake similar precautionary measures.

THE AGITATION for the establishment of Public Comfort Stations in the large and small cities alike, throughout the United States, has resulted in the construction in nearly every city of at least one of these long-ago-admitted-agencies for the better sanitary conditions and training of the city's population. The National Association of Master Plumbers of the United States several years ago at their annual convention went on record as favoring the construction of these conveniences and agitated the matter throughout the country and their efforts have materially increased the number of these stations now in operation. The American Society of Inspectors of Plumbing and Sanitary Engineers have also, as a body, strongly endorsed the plan of erecting such stations, and altogether we are now commencing to see the results of these combined efforts of societies, commercial bodies and those other interested citizens who have made their voice heard in commendation of this great subject.

COMFORT STATIONS ARE NEEDED.

Should one want to look for statistics, indicative of the great good and convenience accomplished by three such stations, they can find it in the recent report of Inspector of Plumbing, A. R. McGonegal of the District of Columbia, which shows that during the fiscal year just closed the attendance at two stations which had been in operation for the entire year, and also a third station which had been thrown open to the public for but nine months, amounted to something over two million of people—both male and female—and that the receipts from the pay compartments—which gives the user toilet accommodation, clean towel and soap for a fee of five cents—and the towel and soap privilege—which is a clean towel and soap for a fee of two cents (used in the public room)—amounted to a sum of over \$2,200. Of course the receipts do not amount to anything like the expenditures, but it is a sufficient amount to cover the cost of laundering and a few other items.

Canadian Society of Sanitary and Heating Engineers

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New Charter Will be Ready for Convention

IMPORTANT ANNOUNCEMENT MADE BY OFFICERS OF THE ONTARIO SOCIETY OF SANITARY AND HEATING ENGINEERS—ARRANGEMENTS COMPLETED FOR THE CONVENTION ON THANKSGIVING DAY—A BIG ATTENDANCE ASSURED.

TORONTO, Oct. 11.—Definite arrangements have been completed for the second annual convention of the Ontario Society of Sanitary and Heating Engineers, in this city on Thanksgiving Day, October 30. It will be held in the Temple Building, on Bay St., the morning session opening at 10 o'clock. In order to facilitate the transaction of business, the committees have arranged to have dinner served in the building at one o'clock. The morning session will conclude at that hour and the members will adjourn to another room for dinner. It is hoped by this means to get the afternoon session started early, and to have all the members in attendance.

Charter Secured.

The announcement is made to-day that the officers will have arrangements completed for securing the charter for the society, in the course of the next few days. The charter has been duly drafted up and, unless something very unexpected happens, will be passed in council and gazetted before convention day. It will provide for the carrying out of the many progressive steps decided upon at the last convention—the holding of examinations, issuing of certificates to all members in standing, etc.

The securing of this charter constitutes the most advanced step that the trade in Ontario has ever taken. The convention, for that reason alone, should prove a red letter event. The discussions will be of unusual interest.

It is practically certain that the meeting will see the completion of arrangements for the institution of examinations. The idea is to admit as members only those who are able to pass the examination and thereby prove their eligibility. It is felt that one of the greatest objects that the society

should aim to achieve is the raising of the standard of work done. This object will be furthered materially by the institution of examinations.

Good Attendance Assured.

A large attendance is assured, but the officers are by no means satisfied yet. They want every city and town in the province represented. While it is too much to hope that this ambition will be gratified, the officers are leaving no stone unturned to bring it about.

Secretary Frankland has sent out letters to all the members who attended the first convention on Good Friday, with requests to invite personally every member of the trade in their respective districts. In addition to that, he has sent circular letters to one man in each city, town and village in the province, with a similar request. If lists had been available, invitations would have been sent to every man in the province but unfortunately the society is not yet equipped with complete information in this respect. Under the circumstances, master plumbers who have not received personal invitations should feel no hesitancy in attending the meeting. The invitation is general and any who have been overlooked may rest assured that it was an oversight.

Delegates Who Are Coming.

Mr. Frankland has received letters from various points, assuring him that representatives will be on hand.

Vice-president Jack Marshall, of Port Arthur, writes that "Twin Cities" will send two delegates. The genial vice will almost certainly be one of them, and the other delegate will probably hail from Fort William. Harry Mahoney promises that Guelph will be represented, if not by the writer himself, by one of the

other substantial M.P.'s of the Royal City. Charley Taylor, of Brantford, writes the Telephone City will send at least one, and John Cunningham, from Paris, will be on hand. Collingwood and Stratford will be represented. The secretary states that he feels certain of London, Berlin, Brockville, and other cities, although he has not received any definite promises yet.

Duty of Secretaries.

It is the duty now of the secretary of each local union to ascertain as early as possible how many delegates will attend, and to send notification of the same to Secretary Frankland, 1093 Bathurst Street, Toronto. It is doubly important that the local should be represented, and the local officers should see to it at once, that delegates are appointed.

Time is Opportune.

There is no reason why there should not be an overflow attendance. By coming down on Sunday or early on Monday morning, and returning by an evening train, it will be possible for each delegate to make the trip without the loss of a minute's working time. As half fare holiday rates prevail, expenses will not be heavy.

A New Era.

The convention will mark the commencement of a new era in the trade in Ontario. "I feel certain," said one of the officers to-day, "that the Ontario society has now reached the point where there is nothing but success ahead. With our charter to work under and laudable objects to work for, we should make things go with a rush. As a first step, we want a bumper attendance on Thanksgiving Day. I believe that it won't be long before every reputable member of the trade in Ontario will be in line."

ON WESTERN TRIP.

W. M. Roden, sales manager of Warden King, Montreal, returns this week from a two week's trip spent in Alberta and the other western provinces. Mr. Roden has been combining business and pleasure.

Montreal Master Plumbers Have Scored a Point

COMMITTEE FROM THE ASSOCIATION GETS PROMISE OF THE WHOLESALERS THAT THEY WILL NOT PREPARE PLANS AND FIGURES FOR THEIR CUSTOMERS—THIS HAS BROUGHT EVILS IN THE PAST—HAS ENABLED UNSKILLED MEN TO COMPETE FOR AND SECURE GOOD CONTRACTS—CONTRACTS WHICH THEY WERE NOT CAPABLE OF EXECUTING PROPERLY.

Montreal, October 14.—Within the past few days a tacit agreement has been reached between representatives of the Master Plumbers' Association and the wholesale houses—an agreement which will mean much for the plumbers, and for the community at large. It will tend to lessen the amount of unfair competition. It will do much to keep contracts from falling to unskilled workmen. It will in a great measure assure the public of having well done that work upon which their health depends.

At the last meeting of the Master Plumbers' Association this question arose, one of the members stating that certain wholesale houses were supplying plans for plumbing and heating equipment to plumbers who were really incapable of drawing up plans for themselves. The results which follow such proceedings were clearly brought out. Men who are practically unskilled in plumbing are enabled to present the plans and figures prepared by the wholesalers, and by means of these secure contracts for work of considerable size. Their figures could well be lower. They had not been required to make the time-consuming calculations for one thing; nor is their time as valuable as that of a man who through years of study has made himself master of his business.

Get Trade a Bad Name.

"These are the men who do such poor work," said one member of the association. "They are the ones who tend to give us all a bad name."

"Why," said another, "I know cases where men have been working as journeymen on minor jobs one week, and have gone out to contract for good work the next. And the bad feature of it all is that with the plans given them by some wholesale houses, and the figures also prepared there, they have been able to secure the contracts."

None of the members of the association were blind to the purpose which has led some of the supply houses to spend their time preparing plans and figures. Thus the wholesalers secure business for men who will get all they require from them. The master plumbers also did not think the supply men had any intention of harming them.

The general impression was that those who had prepared the plans had not understood that it would hurt good plumbers. They had not paused to think that they were enabling unskilled men to step in and do more cheaply, work which should be done by experts.

Committee Appointed.

The question was debated at some length. Then it was determined to appoint a committee to communicate with the wholesalers who it was believed had offended, and to explain to them the master plumbers feeling on the subject. With James Ballantyne, as chairman, and J. R. Meadowcroft, P. C. Ogilvie, Joseph Laurier, J. E. Walsh, R. J. Macauley and Thomas O'Connell upon the committee it was felt the interests of the association would be well looked after.

And so it has proved. The committee has worked hard; has got in touch with all the wholesalers; and has secured from them the promise that they will not draw up plans or figures for any plumbers—whether these secure their supplies from their houses or not. Nothing more is required. The wholesalers have come to recognize what they were unwittingly doing. They see now that they are taking trade from competent men and putting it in the hands of unskilled workmen. They see that the public has been getting work poorly executed where it should have had it done by experts. And they have agreed to withdraw their assistance from the unqualified men.

Fairness Only the Aim.

There is no desire on the part of the Plumbers' Association to make it difficult for a new man to get out after contracts. Every member is quite willing to take his chance with fresh competition. But the master plumbers being master plumbers, feel that any man who is not able to draw up his own plans and to do his own figuring is not capable of doing such a job as the well-being of the community demands. And the master plumbers feel that they should not be put in competition with men who have not been required to spend valuable time planning and figuring. This, at once places them at a disadvantage.

TORONTO MARKETS.

(See also page 20.)

Iron Pipe and Fittings.—There has been an improvement in the situation as regards $\frac{1}{2}$ -inch galvanized pipe. A majority of the supply men report that they are now able to get enough to meet all demands. Business in all lines of iron pipe and fittings is now brisk. Quotations are as follows: Cast iron fittings, 65 to 70 per cent.; malleable fittings, $37\frac{1}{2}$ to 40 per cent.; cast iron bushings, 70; malleable, $67\frac{1}{2}$; nipples, 75 and 10; headers, 60 and 10, although some quote $67\frac{1}{2}$ and 70; flanged unions, 70; malleable-lipped unions, $67\frac{1}{2}$ per cent.; galvanized pipe, \$6.18; black pipe, 1-inch size, \$4.54.

Solder.—Prices remain high. As tin has been steadily going up of late weeks with every prospect of keeping on the upward path, solder quotations are firm. Wiping, in the common grades sells at $21\frac{1}{4}$ c, the better grades as high as $25\frac{1}{4}$ c. Half-and-half in quoted at $27\frac{1}{2}$ c.

Metals.—The situation here is, on the whole, quite satisfactory. Good business is being done in nearly all metals, despite the evil influence of general conditions across the lines and the individual handicapped in certain lines.

The business done up to date this year has been good. The market has had its ups and downs, but if an average were struck, the result obtained would be satisfactory. If the same gait is maintained until the end of the year, the record for the year will be possibly a little in excess of 1911. This, however, is more or less a matter of conjecture.

Public Buildings.

A by-law will be submitted to the ratepayers of Brantford to raise \$85,000 for the enlargement of the John H. Stratford Hospital.

St. John's church, Eganville, Ont., will erect a new edifice.

The First Congregational Church, Hamilton, will build. The new church will cost \$25,000.

Work has been commenced on a \$5,000 school at Inverness, N.S.

An \$8,000 library building is to be erected at Kingsville, Ont.

An \$80,000 hospital is being planned at Nelson, B.C.

The congregation of Norwood Presbyterian church, Winnipeg, are contemplating the erection of an addition.

A ladies' college is to be built at Regina, Sask. Work will be commenced early in the spring and the structure will cost in the neighborhood of \$200,000.

Common Sense the Rule Governing Ventilation

MR. WERNER NYGREN, OF NEW YORK, HITS OUT AT MANY OF THE "DONT'S" ENUNCIATED BY SELF-CALLED EXPERTS—GIVES BRIGHT AND FORCEFUL ADDRESS BEFORE MEMBERS OF BUILDERS' EXCHANGE—EXPERIENCE THE GREAT TEACHER.

MONTREAL, Oct. 7.—It was the gospel of common sense, the gospel of getting results without caring overly much about the rules, which Mr. Werner Nygren preached before the members of the Builders' Exchange. Mr. Nygren, the principal partner of the firm of Nygren, Tenny, and Ohmes, consulting engineers of New York, was the man asked to speak at the Builders' Exchange's first luncheon, held in St. Lawrence Hall last Wednesday. He took as his subject, "Heating and Ventilation," treating this vital question in a way which frequently brought laughter from the listeners, and which held their attention from start to finish. Mr. Nygren absolutely refused to lay down any rules, declaring that no two rooms are alike. A man had simply to use his best judgment in each case. Get the result. That was what he had to accomplish. How this might be achieved was a matter of small importance. "The rule of experience," Mr. Nygren dryly remarked, "is the only rule that applies."

Value of Ventilation.

"In ventilation," said the speaker, "conservatism is necessary. There is no use putting ducts into a room where they are not needed. But in other rooms in the same building the assistance of a ventilation system may be necessary. It is all a case of common sense. Ventilation sometimes enables an improvement upon nature, or at least an improvement upon the adulterated air to be had outside. It enables fresh air to be warmed. It enables the removal of humidity or the increasing of humidity as may be necessary."

Later Mr. Nygren remarked: "Because a ventilation system is installed it is not necessary to run it all the time. People say when there is a ventilation system windows should not be opened. That is rot. Get fresh air in. That is the great thing. Only do it judiciously so that people are benefited and not hurt."

"A poor engineer," came the caustic comment, "won't allow you to use any thing with a ventilation system—not even common sense."

How Much Air.

The question of the amount of air which should be supplied was discussed with the same lack of regard for the many opinions of many self-called author-

HINTS FROM AN EXPERT.

Striking points from Mr. Werner Nygren's speech on heating and ventilation.

"The rule of experience is the only rule that applies."

"Get fresh air in. That is the great thing. Only do it judiciously, so that people are benefited and not hurt."

"A poor engineer won't allow you to use anything with a ventilating system—not even common sense."

"The only thing is to learn to misunderstand advisors correctly. Then do the work your own way."

"One thing I have noticed in examining Canadian buildings—you have no safeguarding system. That, I believe is something which you might well seriously consider."

"There is no use pumping air into a room unless you pump it out."

"Be generous with the fan. Nothing is more expensive than a small fan for a large room."

ities. "Some say that there should be 30 cubic feet per minute," said Mr. Nygren. "Some say 60. I have considered all these opinions, and have come to the conclusion that the only way out of the puzzle thus formed, is to learn how to misunderstand people correctly. Then you can go along and do the work your own way. I have seen some fine results obtained where only 20 feet per capita were supplied. But mistakes are the best way to learn. I have a great many to my credit."

The campaign for air washing now being made, Mr. Nygren thought of considerable value. The system is good, but has one fault. It can't work while people sleep; for few will bear the expense of operating it all night. "The cheesecloth filter," said the speaker, "often gives better results than the water. Indeed, my firm always used it whether it uses the water system beside or not."

Preventing Danger of Fire.

After a few words upon the cost of ventilation—words in which it was brought out that the New York Stock

Exchange had paid \$400,000 for their heating, ventilation and coaling system, Mr. Nygren turned to the great problem which systems of ventilation present—the problem of fire protection.

Under pressure from the underwriters, he stated, a system had been introduced in the United States, whereby flues would shut themselves off upon the temperature reaching a certain height. Thus, in case of fire, these means of spreading would be blocked. This safeguard had been secured by the installation of dampers, held up by links of alloy which melt, and allow the dampers to block the flues, when the heat became intense.

That ventilation plants do increase the fire risk Mr. Nygren openly admitted. Where flues are tapued in all directions, there is a great danger of blazes spreading through them. "That is one thing I have noticed in examining Canadian buildings," he said. "You have no safeguarding system. That, I believe, is something which you might well seriously consider."

Must Take Air Out.

The need of having perfect control over the ventilation system installed was next urged by the speaker. There is no use pumping air into a room, he remarked, unless you pump it out. It is better by far to do nothing at all than to blow in air and not take it out. You do not have to be particularly careful how you get the air out. There is no such thing as a bad strata in a room. All that is necessary to secure good ventilation is to change the air as quickly as possible, so that it is kept like the air outside.

The centrifugal fan Mr. Nygren declared to be the most powerful, but the wing fans, while less powerful, he had found to be more economic from the operative point of view. Disk fans the speaker preferred in many ways for removing the foul air, for this reason, that when not in operation they left a good opening through which the air would pass naturally.

Let Fans be of Ample Size.

Against the practice—encouraged too often by architects and builders—of cutting down fan space, Mr. Nygren spoke vehemently. He quoted figures to show why he objected to the exercise of this form of economy. "A four foot centrifugal fan, of the old standard

(Continued on page 11.)



The Question Box



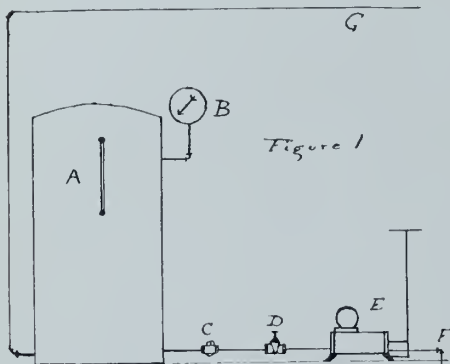
Subscribers are Urged to Send Questions to be Answered, or to Comment on Letters Published. Descriptions of Jobs Done or Shop Kinks are Also Invited.

DOES NOT WORK RIGHT.

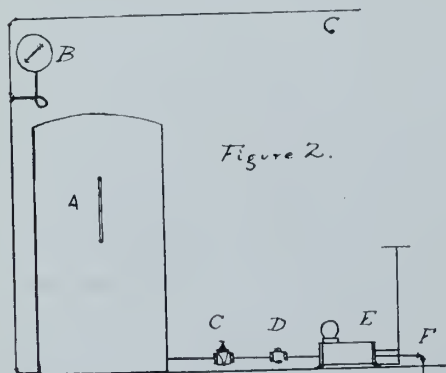
Editor Plumber and Steamfitter:—Am enclosing drawing of a job as I found it installed. It does not seem to hold the pressure nor to register correctly. Will you please criticise the job.

Toronto, Oct. 10. C. HODSON.

In figure 1, as sent to us, one reason why the job does not hold the pressure



is that the check valve is located on the wrong side of the gate valve. The gate valve should be placed as shown in figure 2 and represented by the letter "C." Besides having a better chance to hold the pressure, when so located, one can retain the pressure on the entire system in case that it becomes necessary to repair the check valve or the force pump "E".



We believe that the water glass, "A", should be set a little lower than shown in figure 1, and also that the gauge should be connected as shown in figure 2 rather than as represented in figure 1.

Perhaps the tank might be tapped so that it would lie horizontally instead of standing vertically, such a consideration being a matter of convenience.—D.C.H.

VENTING THE STEAM MAIN.

Editor Plumber and Steamfitter:—Is it a good plan to entirely seal up the steam main so that the air valves on the radiators are the only way that the air can get out? I have never vented the mains and have always had good success with my jobs in heating.

JAMES STACY.

Perhaps many of your steam jobs were moderate in size, or the mains not very long. It certainly stands to reason that all of the air that can be forced out of the main does not have to be pushed along and driven out of the air valves on the radiators. We believe that, if the run on the main is a long one it would be advisable to put an air valve on same. More particularly, if there is several feet of main on the return after the last radiator has been taken off. Put the air valve near the boiler at the point where the drop is made on the return before it descends to connect into said boiler.—D.C.H.

BRANCHES FROM SIDE OF STEAM MAIN.

Editor Plumber and Steamfitter:—On a steam job that I have to fix over the branches are all taken from the side of the main and some of them pocket water which makes them hammer. The cellar is very low and what I want to know is how can I fix the branches right and not have to monkey much with the main? Please run the answer in next issue of the paper.

A. H. KENNEY.

The "tees" on the steam main are probably not thrown up enough. This you will have to do in order to get the right "pitch" on the branches, or they will still be trapped in some places. You can get the "pitch" by cutting crooked threads on the branch pipes.

Another way to get the "pitch" on the branch pipes would be to make use of the "pitched ells." If some of the risers are concealed behind the partitions, you can cut the branch out in the cellar and in connecting in, make use of a union. We are not sure but what this would be the shortest way with regard to all of the branches. It would eliminate all the upstairs work and confine the whole operation to the cellar.—D.C.H.

AN INEXPENSIVE PIPE RACK.

J. F. Brady writes to Plumber and Steamfitter:—A very neat, convenient and inexpensive pipe rack was seen the other day by the writer, one which I believe is not generally adopted by plumbers and steamfitters, yet which is very much better than the usual plan of building up a framing similar to the one shown in sketch number one.

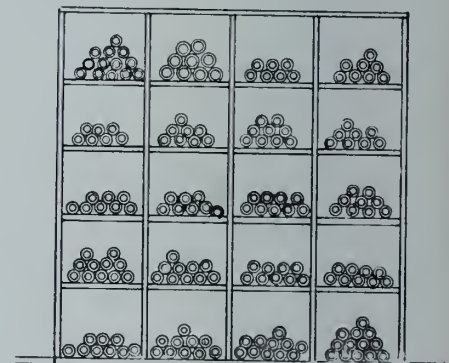


Fig. 1.

The idea to be conveyed by sketch two in this particular case was made by the use of three cedar posts sunk in the ground about a foot alongside of a fence, about three feet apart, and at intervals of about twelve inches. Commencing two feet from the ground to near the top, a pipe eighteen inches long was placed in a hole bored in each post sufficiently deep to prevent the pipe being pulled out by the weight of the pipe. These pieces of pipe which are put in the posts form a firm rest for the pipe.

One of the best advantages in the use

of a pipe rack of this kind is that the pipe can be put on and taken off by simply raising it up and dropping it over the supporting pieces, whereas the plan used in sketch one involves the necessity of getting the end of the length of pipe to the end of the rack and push-

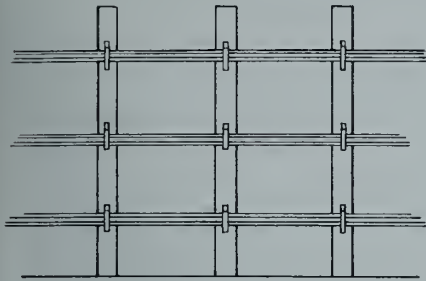


Fig. 2.

ing it in, thus entailing more labor and loss of time over the improved method suggested in sketch two.

The latter method of course can be used as readily inside a building as out, and can be built of other heavy posts than cedar as was used in this case as mentioned.

TO STOP RUMBLING.

Editor Plumber and Steamfitter.—There is a rumbling noise in a range boiler that I have been called on to repair. On the cold water pipe there is a check valve and upon leaving the top of the range boiler the plumber put on a short nipple and ell and ran to the side of the boiler and then at once dropped through the floor running to the various fixtures and raising to them. The pipes are all three-quarter inch in size and the water front a new one and in good order, yet there is a most unpleasant rumbling noise when ever a hot water tap is turned. Enclosed is a sketch of the work.

Woodstock, Ont.

F.

In connecting the boiler as you have

done, you have made for yourself an air trap at the top of the range boiler where you ran across and dropped down with the pipes. Perhaps you did not do the work, but the one who did made the mistake. Again, in putting on a check valve, no chance was left for the expansion when the water became hot. We should remove the check valve entirely. This might be found to remedy the matter, but if it does not, means will have to be taken, through the installation of a valve at the top of the range boiler to get the air out of the pipes.—D.C.H.

HEATING SURFACE.

Editor Plumber and Steamfitter :—I have some steam coils to make and shall use inch and one-quarter pipes in making the coil. Please tell me how many feet of pipe on the coil makes one square foot of heating surface.

Montreal.

J. G.

On the size pipe mentioned (one and one-quarter inch) twenty eight inches of pipe will make one square foot of heating surface.

If the steam coil was constructed of one inch pipe, three feet of pipe would equal one square foot of heating surface.—D.C.H.

PROPER LOCATION OF STEAM MAIN.

Editor Plumber and Steamfitter :—In running the steam main around the cellar, about how far from the cellar wall should it be placed ?

Calgary.

PETER E.

Under ordinary circumstances we should say to run it anywhere from three and one half to four feet. Generally figure it so that you will have as short branches as possible and yet not block any cellar windows. Long horizontal runs on the branches are undesirable, and should be avoided.—D.C.H.

COMMON SENSE THE RULE GOVERNING VENTILATION.

(Continued from page 9.)

wheel type, when run at a tip speed of 3,000 feet per minute, will give 3,000 cubic feet of air per minute, for an expenditure of little more than one horse power. Take the same fan and run it twice as fast and you will get two and one half times as much air, but at the expenditure of twelve horse power.

"Get more room for fans," urged the speaker," and save cost of operating. Be generous with the fan. Nothing is more expensive than a small fan for a big room.

Air in at the Top.

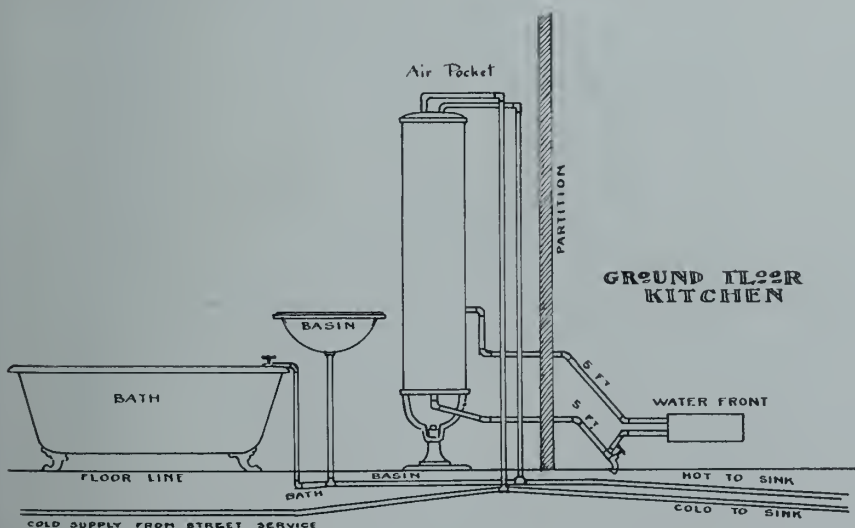
Throughout his address, Mr. Nygren had hit at the pre-conceived ideas of many theorists, as to what should not be done in installing a ventilation system. Before sitting down he aimed a blow at one more theory, namely, that air should be forced into a room near the floor and not near the ceiling.

"That is all right," remarked the New York engineer. "Only it is not always possible. Often if the air is put in near the floor, a draft will be caused. What is required is to get a quick circulation. People give off from their bodies a discharge of air something like the outbreathing of the nose. If that envelope is not moved away by the circulating air, the person becomes drowsy. He must not feel the circulation, but he must feel its effect. To get that effect I have often found that it is absolutely necessary to put in the air overhead."

A GREAT ACHIEVEMENT.

The Summerside Pioneer states that "the great achievement of the century" is the advance in plumbing. The pioneer says in part:—

"The supply of rooms and baths is not so nearly equal to human needs as the supply of newspapers, but it is gaining on population. Out there at the house of some friends of mine, for example, it has caught up. In all the newer country houses hereabouts the great architectural feature is room and bath. In a Long Island house just completed that I inspected last spring before the family moved in there were between twenty and twenty-five bathrooms. There were three people in the family, with a liability to guests if the owner's wife ever succeeded in getting rested. I thought this marked a considerable forward stride in civilization. Church unity still hangs back a bit, but we are getting pretty strong on plumbing, and the millennium may find us with a bath apiece."



Water Supplies for Rural Homes

ONE OF THE VITAL NEEDS OF THE RURAL HOME IS A SUPPLY OF PURE WATER FOR KITCHEN, LAUNDRY, TOILET AND BATH—PRACTICAL SUGGESTIONS AS TO HOW THE SAME CAN BE OBTAINED.

BELOW are given some extracts from an article by Walter James Brown, in Farmer's Magazine :

One of the greatest needs of the average rural home is a supply of pure water in an accessible form for use in the kitchen, laundry, toilet and bath. As a rule, farmers have paid too little attention to the needs of the house in the matter of water supply. They have not hesitated to install a system for supplying water for the live stock of the farm and every effort is made to economize farm labor about the buildings, but the housewife who is already overburdened with work must pump the water required for household purposes, and carry it into the house and as soon as used carry it out. After a well has been dug and a cisten constructed, from which water may be had, it is assumed that the huse is fully provided for. In some instances, drinking water is secured at a spring several rods from the house, while soft water is caught in barrels and tubs from the eaves when it rains. On more up-to-date farms the well may be found on the back porch or in the wood-shed, which lessens the exposure, but still involves pumping and carrying.

Fortunately conditions are changing for the better, and on the farm as in the town or city house it is now universally admitted that such a thing as a kitchen sink is simple economy. Many modern farm houses have sanitary water works installed, and toilets and bath rooms

provided with modern fixtures. In time every good farm house will have running water in the house. The drinking water may or may not be brought in pipes. These water supplies can come by gravity from high springs or creeks; the water may be elevated by pumps, or a supply secured from the roof. In one way and another all farm residences may with very little expense have a complete water system to lessen labor, to minister to the family comfort and health, to provide protection from fire, and to supply water for the garden and lawn.

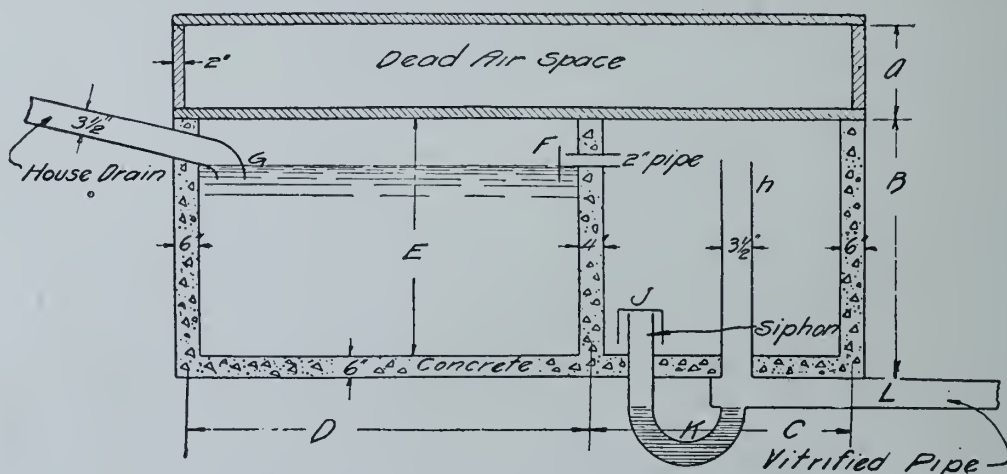
The Water Supply.

There are several ways of supplying a house with water. The particular method which should be employed will depend on the peculiarities surrounding any special case under consideration. The simplest and best method is to pipe the water from a spring or brook at a point high enough to cause the water to flow freely from the house faucets. If from a spring, the quantity must be examined. This can be done by measuring in pailsful the overflow of the spring. Not counting the water needed for the barn, allowance should be made for at least three hundred gallons in twenty-four hours, or better, six hundred gallons for a family of ten. This would be secured by a flow at about the rate of two quarts per minute, or five minutes to fill a ten-quart pail. There are several factors to be considered in esti-

imating the adequacy of the water supply from a spring. Is the flow sufficient when the spring is lowest? Is it rapid enough to be drawn on regularly for daily supplies, or must a storage be provided? Is the spring sufficiently elevated above the house so that the water will flow to the highest point desired? As there is a good deal of friction in using a small pipe, is the head or pressure sufficient to give the amount of water required? If the source of supply is to be a brook whose purity has been established, it will be sufficient to lay a pipe into the brook, protect the end by a strainer (being careful to tamp the earth well back into the trench in which the pipe is laid). If the spring which supplies the brook is too far removed to be drawn upon or if the brook is likely to run dry in summer time, then storage becomes necessary. Care must be taken in constructing a reservoir to secure a sufficient quantity of water so it will not in hot weather become stagnant and offensive. Allowance must be made for excessive use during the dry season, for soakage and evaporation. The method of constructing a dam for a reservoir will depend upon the soil, the money available, on the permanence desired, and on the opportunity for overflow.

Gravity System More Reliable.

Where water cannot be secured by gravity, wells will be necessary. The best well is an artesian which is either bor-



*Longitudinal Section
-of-
Septic Tank for Country Home*

ed or driven and in which the water is under sufficient pressure to rise to the surface. Sometimes the pressure in the well pipes is great enough to force the flow into the second storey of the house. Deep wells are similar to artesian wells, except that the water does not reach the surface and has to be pumped sometimes from extreme depths. Shallow wells are driven or merely dug into an underground stream, the water from which is pumped or drawn as required; it is necessary to pump water when it cannot be secured in any other way, but pumping is an expensive operation. The daily charges for maintenance are very likely to represent a large amount of capital invested. Ten cents a day may not seem to be a large amount to pay for pumping the water supply, but this aggregates \$36.50 a year, which at five per cent. is the interest on \$730. It is very seldom, therefore, that when a gravity system is at all possible that pumps should be installed. Aside from the cost the gravity system is much more reliable.

One of the cheapest and most satisfactory sources of power, if a fall of water is available, is the hydraulic ram. This requires very little attention and the fall of the water does all the work.

Farm Bath Rooms.

Supplying water to a house inevitably brings with it added desires for conveniences before impossible. As soon as there is running water in the kitchen a modern bath room is found to be almost a necessity. But the installation of running water means that it must be protected during the winter months by heat or the pipes will freeze. A bath-room and wash-room may be arranged in a room off the kitchen; where a modern bath-room is found it may be in a room over the kitchen or sitting-room

and kept warm by a register or drum around the smoke pipe, but such an arrangement would require constant care and vigilance in cold weather. In a furnace-heated house there is no difficulty whatever regarding the freezing of the water pipes, or if the stoves are kept going during excessively cold nights the danger in this respect is removed. Assuming that conditions are suitable, the fixtures and piping that will be required may be summarized as follows: (1) A tank in the attic, to store water from a small pipe, providing the pipe flow or pump capacity is small; not needed, of course, if the direct supply from the source is adequate. (2) A main supply pipe from the tank or from outside supply feeding the kitchen sink, the hot water boiler through the kitchen stove or furnace, the laundry tub, the bath tub and water closet tank. (3) A hot water pipe leading out of the hot water boiler to the kitchen sink, the laundry tubs and bath tub. (4) The necessary fixtures such as faucets, sinks, tubs, kitchen boiler, water closet tank and fixtures. A fair estimate of the cost of all this plumbing, except the tank in the attic and including the cost of skilled labor is \$155. There are various schemes for supplying water at smaller cost by using cheaper fixtures and by helping in the work of installation.

Disposal of Waste Water.

The disposal of the waste water from the house becomes more serious as the amount of water increases. When the water runs in streams from the kitchen, laundry and bath-room, some better method of disposing of it must be devised than merely throwing it out the back door. The simplest outlet is into a running stream, provided the water is not used afterwards by some neighbor for drinking or watering stock, and pro-

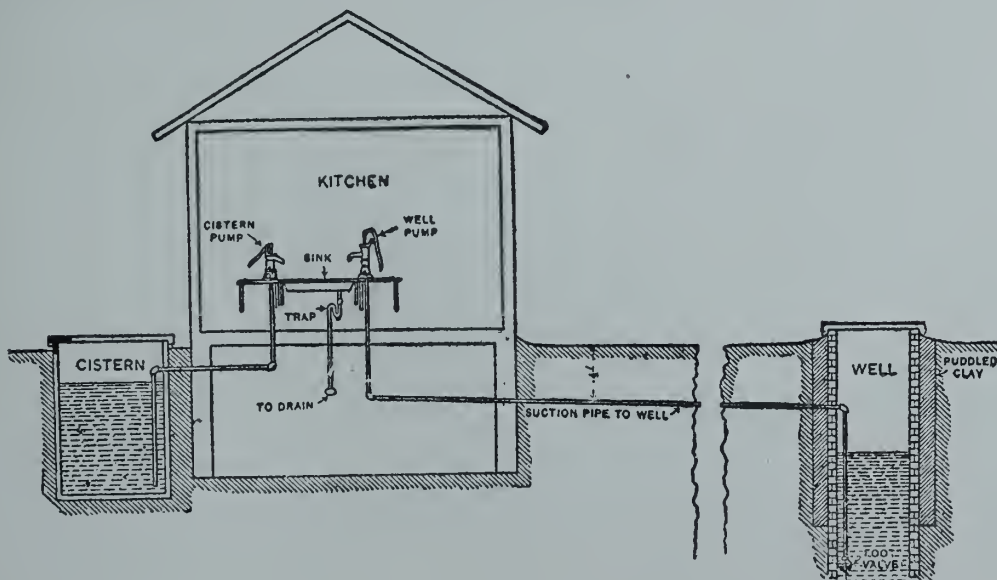
vided its volume of flow in the driest months is at least forty times the flow of the sewage turned into it. Where such an outlet is not available it is necessary to construct a cesspool, a septic tank or provide for the sewage disposal by sub-irrigation through open tile. In gravelly or sandy soils a cesspool will often work satisfactorily, but in heavy clay or clay loam it is not feasible. It should be about six feet inside diameter, and eight or ten feet deep, walled up inside with stones without cement. Such a cesspool will allow the liquids to leak away, and the solids remaining will gradually be liquefied so that a cesspool of this sort will probably last indefinitely. It is only permissible, however, where there is not the slightest danger of polluting the well or other drinking water supply.

The most satisfactory method of disposing of household sewage when no sewer connection is available is the septic tank. The following description of such a tank has been prepared by W. J. Gilmore, B.S., of Manitoba Agricultural College. From the house the sewage is carried in a cast-iron pipe to at least five feet from the foundation wall. From this point to the septic tank, vitrified pipe is used, except in made ground, quicksand, or near some important place, as a well, where extra precaution must be taken. In any of these cases, cast-iron pipe should be used. The drain should be given a uniform grade if possible and be put to a depth sufficient to avoid freezing.

A fall of one in one hundred and fifty is the least that should be used, but the greater the fall the less liability of obstruction.

(Continued in next issue.)

A new Roman Catholic church is to be built at Ottawa.





POINTS ON HEATING

By
CHAS. H. DENISON



Chapter 16.

In figuring the amount of radiation for a room or building, it is well to look affairs over before making out the estimate. No matter whether the building is old or new, you should know all about the exposure, the way it is built, the chimney, the arrangements for ventilation; say there are a dozen other things that should take you out to examine the building and not just figure it, offhand, from the shop, as has been done frequently and many times to the owner's regret.

The first rule that I had shot at me was one day when I was at work on a job and the "old man" came in to the building with a rush. He had some doubts about the heating of a certain room, and said, "look here kid, measure up this room and figure her one to forty, and let me know right away." There was another fellow working on the job, and I got the tip how from him. I had been taught to work, but not to figure. It was one of the things that started me looking for more information. That was a long while ago, and that old "40 to 1" rule is used yet in some sections of the country, although it cannot be recommended as accurate upon all occasions.

The rule was to multiply the length, width and height of the room together, thus getting its cubical contents, which were then divided by 40, the resulting number being the number of square feet of radiation necessary to heat the room.

When It Failed.

Sometimes it heated the room and other times it failed. No consideration was given to the amount of glass or exposed wall, or the location of the building. Hence, unless the man doing the estimating, possessed a large amount of common sense coupled up with good practical experience, and also was willing to figure so that he could afford to give the customer a guaranteed job (and make the same good in case it failed), there was no absolute certainty as to just how the rooms were going to heat. A better rule, and one that is used somewhat extensively to-day, is what is called the "2-20-200" rule, for steam.

This means that for two square feet of glass surface, one allows one square foot of radiating surface. Outside doors should be counted as glass surface. In figuring this for myself, I always counted the outside doors as glass surface, when they were not protected. If there is a stormhouse over the door, I figured it (the door) as wall surface.

For each twenty square feet of exposed wall surface, one square foot of radiation should be allowed.

For every 200 cubic feet of contents in the room allow one square foot of radiation. This rule, speaking generally, works out very well, and one can not get much out of the way when it is used. There are certain cases when more care will have to be exercised. I am going to put this rule in such shape that anyone can cut it out of the paper and file for handy use.

"2-20-200" Rule for Radiation.

2 square feet of glass—1 square foot of radiation.

20 square feet of exp. wall—1 square foot of radiation.

200 cubic feet of room's contents—1 square foot of radiation.

N.B.—On northwestern exposures it would be well to add 10 p.e. to the estimate. Consideration must be also given to the construction of the building. Few rules yet devised will heat the building. A fair rule mixed with "horse sense" generally accomplishes wonders.

The man who stieks, absolutely, to his rule and figures that it is going to do the heating right, is the man who will get sadly left on more occasions than one.

In using this rule for hot water estimating, there seems to be a difference as to the amount to be added. Some adding one-third to the steam radiation and others as high as 60 per cent.

This may be accounted for sometimes by the difference in the construction of the buildings, and also as to what part of the country the job happens to be installed in, as considered in a previous article.

There is another way of estimating the radiation in buildings, and that is by using what is called the "B.T.U." method.

This is not used extensively by the trade, for the reason that it is not understood thoroughly, because many of the books bearing on the subject are not as clear as they might be, assuming too much technical knowledge on the part of the man who has to work out the problem.

We will suppose that your guarantee reads that the room we shall consider shall be heated to seventy degrees when the mercury is ten degrees below zero on the outside. In working this out there are several things to be considered: viz., glass surface (exposed door figured as glass); the exposed wall; the number of changes in the air per hour; the heat units lost for difference between inside and outside air; and the number of heat units per hour that the radiator will give off.

To the sum total of the glass surface add one fourth of the number of square feet of exposed wall. Then multiply the number of cubic feet in the room by .04 (which same allows for two changes of air per hour), adding this result to the two previous sums (the glass surface and number found by dividing the total exposed wall surface by 4). The sum of the three numbers represents the heat unit loss, for every degree difference between the room's air and the air outside of the room. In the case mentioned (ten degrees below zero), it would amount to 80 degrees. Multiply the total of the three sums by the amount found as the difference between inside and outside air and you have the loss, in heat units from the room for the hour.

It is stated that, when the job carries two pounds steam at the boiler, one square foot of ordinary radiation will give off about 275 heat units per hour. You now have the heat, per hour, that the radiator will throw off, and also the number of heat units lost per hour from the room. Use the 275 as a divisor, pointing off correctly, and you will have the number of feet of radiation required. Remember this, no rule will see you safely through unless used with the good horse sense before mentioned. That's why so many jobs fail. Some people are long on rules and short on the horse sense.

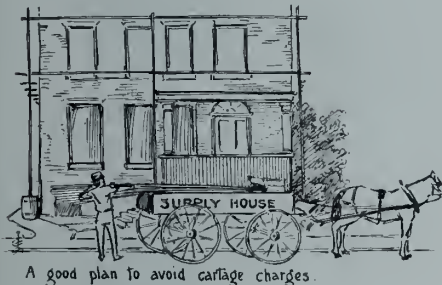


TOPICS OF THE TRADE



CARTAGE bills constitute an item worth watching. It is surprising how fast they mount up. Most plumbers do their own carting, but the expense entailed in this way totals up to surprising figures at the end of the year. Others feel that they cannot afford a horse and rig, but then go ahead and foot bills for cartage, which makes the expense of maintaining a horse appear insignificant. The writer has met a few men, however, who have succeeded in cutting their transportation bills down to the minimum.

"I did about \$3,000 worth of business in the last two months," said one man. "Now, guess how much I paid for cartage during that time?"



A good plan to avoid cartage charges.

"About thirty dollars."

"Three," was the reply. "I got through the two months on an outlay of three dollars only."

His system, as he explained, was this. When there was a job on hand to be done, he always went up himself and estimated what material would be needed. This he did most thoroughly, to make sure that the material delivered would be neither too little nor too much. Then he placed his order with the supply house and had the goods delivered right to the job. The pipe used was cut right at the shop and taken to the job by the men. In cases where there was anything over the quantity was so small, that it was possible for the men to take it back to the shop.

Only on two occasions during the two months had he found it necessary to

hire a carter. This is a pretty fair sample of skillful business management.

* * * *

This complaint was voiced to a manufacturer the other day by a young fellow who had been in business for himself



Handing money to customer for privilege of doing work for him

for about a year. "I started in on my own hook with a nice little bit of capital, and now I haven't got very much left. And yet I have been busy all the time. What's the matter?"

The manufacturer felt concerned; in the first place, because the plumber was a regular customer and had a little account which needed straightening, and secondly, because the young fellow was the bright and likable kind that one is anxious to see succeed in business.

"How do you figure your contract work?" he asked.

"I total up the cost of material and labor," was the reply, "and then I add 7 per cent. for a profit. Surely that is fair."

"Get out a pencil and we will do some figuring," said the manufacturer.

Then he put the other man through a cross-examination on the subject of his overhead expenses, and made him jot down everything that they thought of. When the year's expenses were totalled up, they found that the result was just 10 per cent. on the amount of business that had been done. "Now you see where your capital has been going," said the manufacturer. "You've been paying 3 per cent. on every job to your customers for the privilege of doing work for them. That's what you have been doing."

"Profits are necessary in every business," he continued, "if the business is to be continued. Now profits are waiting for everyone, right outside your own store door, if you have enough sense to lug them in. But you have to send a bigger helper than 7 per cent. to bring profits into your headquarters. Fifteen per cent. is more the size."

"I can see now," said the young master, "that the only thing which has



It won't take long to empty the bin

kept me in business at all has been the jobbing work. I have always made a good profit there."

"Yes," said the other, "but when you start to ladle your capital out with a contract price-cutting shovel, you soon empty the bin."

The young man has learned his lesson.

J. SMITH PLUMBER



Why send the little fellow to do the work when the big fellow is needed

He told the writer the other day that he did not intend to touch any work in future where he could not put on from fifteen to twenty per cent. to cover his expenses and insure a profit.

Preparing to Meet Objections to Bills

JOHN WATSON, OF MONTREAL, HAS TIME SHEET ON WHICH JOURNEYMEN MUST DESCRIBE THE WORK DONE, AND TO WHICH HE MUST SECURE THE SIGNATURE OF THE MAN FOR WHOM THE WORK WAS DONE—ACCOUNTS CAN THUS BE PROVED—GUARDS AGAINST ALL DISPUTES.

Upon two classes of people it is necessary that the master plumber should keep some kind of tab in order that he may avoid unpleasant and unprofitable disputes. He must have an accurate record of the time his men have worked for him, and of the material they have used; and he must have the acknowledgement of the people for whom a job has been done that it has been completed satisfactorily. With statements covering these two points in his possession, the master plumber is practically immune from disputes with his men, and from more common and more unpleasant disputes with those for whom he has executed work.

Complaining Customers Common.

John Watson, of Montreal, in common with the majority of plumbers who do a large business, has been troubled in the past with people who question the bills sent to them for payment. Rarely, if ever, has he had a dispute regarding their time with one of his men; but he has frequently heard from complaining customers that the men have not worked as long upon their job as is recorded in the bill. To enable him to answer such complaints Mr. Watson has prepared a sheet which the man undertaking every job must fill out, and to the correctness of which

the man for whom the job was done must testify. This help has only been in use for a few months, but already it has shown its value. People disputing their accounts have been shown the time sheet with their own signature affixed. They have seen their own name certifying to the very facts to which they have taken exception.

Every Branch Covered.

The time sheet as prepared by Mr. Watson, is so simple that there is little possibility of mistakes. On the right hand side is a space for the day and date. Then beneath, a larger space in which the journeyman is required to summarize the work done. On the left hand side of the sheet is the space for the workman's name. A month afterward the man who did each job can be traced through these sheets. Responsibility can be fixed.

Lower down is the name of the man or woman for whom the work is done, and underneath, a line on which the workman states whether or not the job is complete. That is present so that accurate account may be taken of each day's work on a job which extends over many days.

The time spent on the work by the plumber is stated. The time spent by a helper, if one has been employed, is

also set forth. So also is the time used by a journeyman of another trade, such as a carpenter, or brick mason, for sometimes it is necessary to secure the assistance of one of these.

Keep Tab on Expenses.

Account is kept of expenses too. There is a line on which the plumber must state what he has spent for car fare, etc. Also the legitimate expenses of any helper who worked on the job must be set forth. Record is also kept of any cartage which has been necessary.

Then underneath, is a line upon which the name of some one in authority—the owner of the house upon which the work is being done, or else the tenant—must be written.

There is no loop hole left for mistake. From this time sheet the bill may be made up. It shows the amount due for wages. It shows the expenses. It shows the amount of material used. And let the account be disputed; let the man for whom the work has been done say that the time of the journeyman is wrongly set forth, and there is the certified sheet to show that all is right.

Men Made Careful of Material.

Of course, the time sheet also has its effect upon the journeyman. He knows that he must account for his time. He knows people will not certify that he has been at work longer than he really has. If he should wish to soldier he has no opportunity, and so he can accomplish more work. And he has to account for material. He cannot waste.

For Mr. Watson this system of keeping track of the man doing the work, and of securing the O.K. of the man for whom the work is done, has worked out splendidly. Others might well introduce such a system. It is such devices which prevent mistakes, which make business more profitable, and infinitely more pleasant.

MUNICIPAL UNDERTAKINGS.

Swift Current, Sask., ratepayers will vote on a by-law to raise \$44,000 for a waterworks system.

A by-law is to be voted on at Galt, Ont., to raise \$10,000 for extensions and improvements to the waterworks system.

Workman's Name
Charge to
Address
Is Job Complete?
Time Plumber hrs.
" Helper hrs.
" Other trades hrs.
Expenses Plumber \$
" Helper \$
Cartage
Any tools or material left on job?

Job No.
The above time and material is correct
Sign here

TEL. W. 319

JOHN WATSON & CO.

4145 ST. CATHERINE STREET

19

TIME SHEET

Write down under the heading a complete account of work done.

(This Sheet must be signed by some one in authority on the job)

This time sheet must be made up before leaving the job and turned in every night.

A Time Sheet Which has Rendered Questioning of Accounts Well Nigh Impossible.

Prevention of Deaths in Well Sinking

THE FOLLOWING IS AN INTERESTING ARTICLE WRITTEN FOR PLUMBER AND STEAMFITTER BY THOMAS WATSON, PROVINCIAL SANITARY INSPECTOR FOR SASKATCHEWAN.

The number of deaths occurring in the process of well-sinking and construction, especially in the newer Western Provinces, is alarming indeed, the mortality from this cause is far greater than that arising from the many steam and gasoline boilers and engines in use by our farming community. Such deaths seem to be looked upon as purely accidental, little or no enquiry is made into the cause, and each recurring death is simply an eight days' wonder or mystery. Sudden and accidental deaths are usually the cause of enquiry, when evidence is produced or sought to find or prove why and how such occurred. Such enquiries are held by officials whose duty this is, and the jury of men empanelled to hear the evidence and enquire into all the facts and circumstances invariably find the cause. The results of such findings are recorded and published in the press for the benefit of the public, which in this way often gets warnings of value. In all the recorded instances of deaths from asphyxiation, no reason has been given telling why death should occur from such a cause, and therefore the public, or those whose work exposes them to danger have had no warning to prevent future and further loss of life in similar circumstances. Some one is to blame. Those deaths, which are almost always of strong men, are preventable and ought to be prevented. Carelessness, but much oftener ignorance, are to blame for such unnecessary and untimely deaths, and some method of arresting this human waste ought to be widely disseminated to educate all exposed in this dangerous work.

As "prevention" of disease and death is the watchword of all public health authorities, ought not they to adopt some means to control conditions under which contractors and others will be permitted to undertake the sinking of wells and shafts?

The cause is simply want of ventilation. Speaking of life and the necessity for ventilation, Dr. W. Noel Hartlet says, "Starvation is a matter of days with solids, hours with liquids, but of minutes with air."

Apart from any gases emanating from the soil, or generated by the liberation of blasting agents, there is the accumulation of carbonic acid gas and the water and effete poisonous matters

given off from the lungs and bodies of those working—these are the deadly poisons that lurk in unventilated shafts that bring death so suddenly.

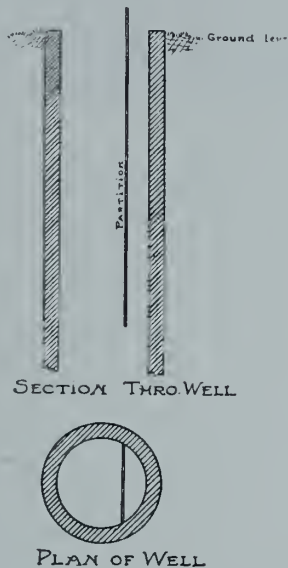
It should be better known that without any means of carrying off such poisonous products and of supplying life-supporting oxygen, life is in danger.

Why should men be so rash as to risk their lives by descending wells to work without first ascertaining whether conditions are safe? The lowering of a lighted candle or lamp will demonstrate in a few moments whether the air is foul or fresh.

The remedy, therefore, is in providing means for renewing the air at the bottom of the well. This is simple, and consists merely in dividing the shaft or well into two separate parts, from the surface down to within a few feet of the bottom, thus creating an inlet and an outlet without which there can be no ventilation. This can be done by means of a thin baffle or partition of wood or any other suitable material. The accompanying cut explains the method.

In wells of small diameter where any partition would interfere with the work of excavation, a pipe or tube can be used as an inlet for fresh air. There can be no excuse for lives being lost in well sinking from asphyxiation, which is criminal, and when such occurs responsibility should be placed on the guilty shoulders and punishment awarded.

The Bureau of Public Health, Regina, Saskatchewan issues a "bulletin" on "Precautions to be observed in Well



Sinking," which can be had on application

IN NEW QUARTERS.

Andrew Fulton, of Enderby, B.C., plumber, tinsmith and hardwareman, has established himself in a new store. The new building is of good size and appearance. It is 50 ft. wide by 110 ft. long this giving a large floor space for display and storage purposes. The ceiling, which is 14 feet high, is finished with a beautiful pattern of metal ceiling, and the walls are covered with the same material. When lighted up at night, the effect is very fine, and it helps materially to improve the appearance of the stock.

Directly behind the main show room is a warehouse twenty-five feet deep, with an elevator in the corner, 14 feet by 7 feet in size. This is large enough to take up or down a wagon set up ready for use. As a further convenience, a large doorway at the elevator makes it possible to load and unload from wagons without any heavy lifting. On the second floor there is a well-equipped tinshop, 40 feet by 25 feet in size, where Mr. Fulton's contract work is attended to.

BATHROOMS IN EUROPE.

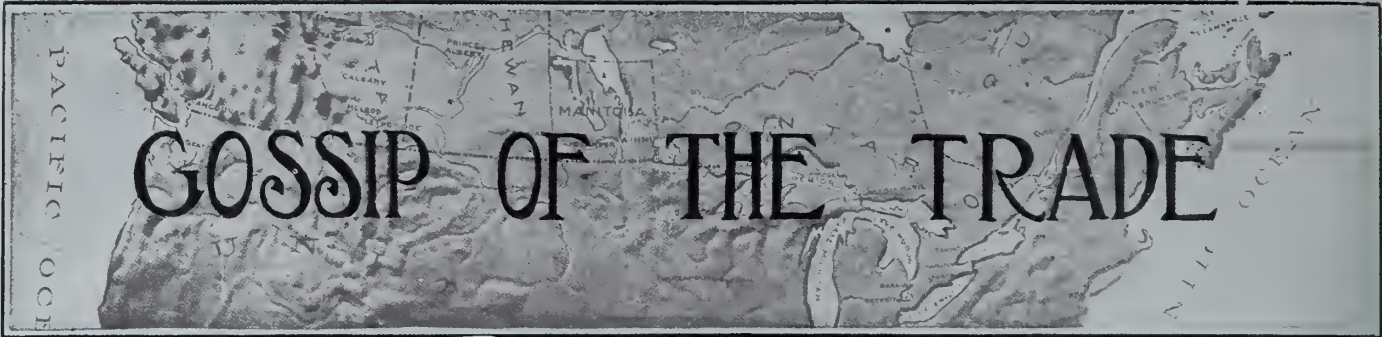
The value of bathrooms is receiving somewhat extended recognition in the principal cities of Southern Europe, these conveniences being installed in most of the large buildings constructed for domiciles, and being added to many old ones. The fixtures and their arrangement, in appearance or utility, are not equal to similar fixtures made on this continent. Generally speaking, the water-closet fixtures are poor and inefficient, and are installed regardless of artistic and sanitary requirements. The practical exhibition of an American bathroom and water-closet, both separately and together, in the large cities of Europe, would furnish business for the manufacturer who would install the exhibitions. Agencies should be established in this way. Correspondence and illustrated literature printed in English will be as profitless as pouring water in a sieve.—Construction.

A new city hall is to be erected at Edmonton, Alta. The Rice street market square has been chosen as the site.

A new warehouse is contemplated for the Imperial Oil Co., at North Battleford, Sask.

The Canada Steel Foundries Ltd., Welland, are contemplating extensive additions to their plant.

F. M. Brown, Alliston, is building a new factory.



GOSSIP OF THE TRADE

Fell From Ladder.

Ward McCombs was injured while assisting to instal the heating system in the Beamsville, Ont., School. He fell from a ladder, sustaining injuries to his ankle.

Boosted for Competitor.

M. Conrad, of the firm of Conrad Bros., Waterloo, was in Toronto on business this week. During the recent election, Mr. Conrad worked hard for his competitor who ran on the Conservative ticket and no one was better pleased with the result.

Free Courses Start.

The opening of the free courses given by the Council of Arts and Manufactures at Quebec, occurred on Oct. 9. Plumbing classes will be held on Mondays and Wednesdays, with Mr. Nap. Gendron in charge. Each pupil must deposit the sum of fifty cents, which will be returned at the end of the term to those who have not been absent more than four times.

Held a Banquet.

The United Association of Plumbers and Steamfitters, Fort William, to the number of about forty, banqueted at the T. & H. Cafe recently. General Organizer Bruce was in attendance and replied to the toast of the Association. B. Cullen was in the chair, and during the evening music was supplied by Messrs. Milton Kerr, James Hozak, Jack Roberts and O. C. Lockyer. It is proposed to make the function an annual one.

Plumbers Help Widow.

At a special organization meeting of the Plumbers' Union, Winnipeg, a large number of new members were initiated. J. Bruce, special organizer of Toronto, was present and gave an address. The sum of \$125 was collected among the members towards a fund for the widow of the late Geo. Weir, whose death occurred about two months ago as the

result of blood poison. Mr. Weir had been for many years a faithful and hard working member of the union.

The Smoke Test.

The Toronto medical health officer has published this piece of advice: "People who are about to purchase houses should see that a smoke test of the plumbing has been made by the Department of Health. No plumbing is finally passed by this department until a smoke test has been applied. A great deal of trouble has been caused purchasers of houses owing to the fact that they are unacquainted with this regulation, and neglect to see that their lawyer, in transferring the property, has gone into this phase of the question."

Central Heating Plant.

A central heating plant, costing in the neighborhood of \$2,500, will be installed in the new Wellington county jail at Guelph. This was decided upon at a meeting of the joint county and city committees held at the court house. The plant will be a low pressure steam one, which is almost the same as hot water, and will heat all the county buildings, including the registry office and the crown attorney's building. It will also be so planned that when a new court house is erected the system can be extended to it also. It will be built in a separate portion of the jail property, and will be entirely under ground.

Cleaning Up Chinatown.

The Victoria Colonist says:—The sanitary inspector is making rapid work in his campaign against uncleanness and unsanitary buildings in Chinatown. A number of men have been engaged for the past few weeks cleaning up premises in the Celestial quarter and a number of unsanitary quarters have been demolished. Complaints from owners of these buildings have been made to the city council, but a report of the building inspector, appointed to investigate the complaints, is to the effect that the

sanitary department's measures are necessary and that the work has resulted in much needed improvement in that section of the city.

Firm Have Moved.

McIlraith & Sykes, Renville, Minn., have moved to Olivia, Ont., where they will continue in the plumbing and tin-smithing business. They have rented a good shop there. Before leaving for their new home, a reception was given in the M.E. church in honor of the two families. Each family was presented with a parcel containing a linen table cloth, half a dozen table napkins to match, a souvenir spoon and a rocking chair. The Renville Star Farmer says: "Messrs. Sykes and McIlraith have been in business in this city for a number of years and have always shown themselves to be men of integrity and always obliging and willing workmen."

News Briefs.

F. L. Ginby has opened a tinshop at Milden, Sask. He has erected a building 25x115 feet.

T. G. McClatchie, tinsmith, of Hemmingford, has returned from a trip to Saskatchewan.

Messrs. John Watson and Walter Ryan, of Montreal, spent a few days fishing on Lake Manitou last week. They there felt the chill of the season's first snow storm, but came home happy with a fine string of trout.

General Building.

A reinforced business building to cost \$500,000 will be erected on the docks at Quebec.

The St. Catharines Broom and Brush Co. are contemplating the erection of a factory in Calgary.

E. W. Davis, Calgary, has under consideration the erection of a nail factory at Medicine Hat.

Two Medicine Hat men are carrying on negotiations for the establishment of a factory there to manufacture gas well drilling machinery. The cost of the buildings is estimated at \$15,000.

News of the Manufacturers and Wholesalers

AT THE C.M.A. MEETING.

Toronto, Oct. 12.—The annual meeting of the Canadian Manufacturers' Association opened here to-day in the King Edward Hotel. It was attended largely. Over four hundred members registered, and probably half of that number were present at practically all of the sessions.

The sanitary and heating trades were well represented. Among the manufacturers noticed in attendance were: E. H. Gurney, Gurney Fdy. Co.; J. H. Paterson, Toronto Hardware Mfg. Co.; R. J. Cluff, Steel and Radiation; Fred Armstrong, F. Armstrong & Co.; W. J. Dunkin, Sheet Metal Products Co.; H. O. Kerr, Kerr Engine Co.; H. M. Anthes, Anthes Foundry Co.; Jas. L. Waldie, Canadian Tube and Iron Co.; W. W. Near, Page-Hersey Iron Tube and Lead Co.; A. W. McArthur, Standard Ideal Co.; J. T. Sheridan, Pease Foundry Co.; R. R. Mitchell, Robt. Mitchell Co.

Among the topics discussed was one of particular interest to the hardware trade. A. F. Hatch, of Hamilton, called attention to the fact that the Ontario Government had imported American hardware for every provincial building erected in the last four years. He urged that the Association place itself on record against this practice.

R. S. Gourlay suggested that they should not ask corporations to do what they did not do themselves. Prices being equal, Canadian goods should be preferred.

John Ransford thought this was a time, if ever, when the Association should come out flatfooted on the subject.

"I am ready to sit right down," he said, "if you can give me one solitary instance of the American Government using Canadian goods, or even advertising in Canada for tenders. They want to have nothing to do with us, and they won't buy from us if they can possibly help it."

SOME COMING ADDRESSES.

Montreal, Oct. 14.—As yet the speaker who will address the next noon day gathering of the Builders' Association, has not yet been decided upon. Plans for subsequent meetings are, however, nearing completion. There is to be a talk on reinforced concrete, and another upon cement and its uses. H. M. English, analytical chemist of the Stark Rolling Mills Company, of Canton,

Ohio, is being communicated with, and it is expected he will shortly address the association. The theme being suggested to him is: "The adaptability of chemically pure sheet iron for building construction."

SHOWROOMS NEARLY READY.

The new Montreal show room of the Standard Ideal Company, on Beaver Hall Hill, is being rushed along with the utmost speed. It is expected that this will be completed in another fortnight. Already business is being done in the building.

TO COMMENCE WORK.

The Radiant Electric Co., will commence work immediately on their factory at Grimsby in accordance with the by-law recently passed by the village. The initial cost of the factory, according to the Electrical News, will be \$10,000. A very complete line of electric household and other appliances will be manufactured, including an electric range based on the fireless-cooker idea. M. R. Riddle is president, H. Bottelier, sec.-treas., H. Hewitt, managing director.

NEW SYSTEMS INSTALLED.

The Webster Vacuum heating system is being installed in Pattinson's woollen mill at Preston, Ont. A sprinkling system is also being installed in the large addition built this fall.

BIG WORKS UNDERTAKEN.

Regina ratepayers have carried by-laws by large majorities to raise \$150,000 for waterworks and the same sum for a trunk sewer. The work will be started at once.

NEW PLANT OPENED.

Another new industry was added to Calgary's manufacturing establishments on Saturday afternoon when Mayor Mitchell formally opened the plant of the Alberta Sewer Pipe Company in East Calgary. The ceremony was attended by a large number of representative business men of the city, who were shown over the works by the officers and directors of the company and were given an opportunity of examining the products and seeing the process of manufacture. A feature of the opening was the manufacture of the first official thirty-inch pipe by Mayor Mitchell, who handled the lever which controlled the operation of the machinery with all the confidence of

a skilled operator. The result was a large sewer pipe in every particular.

The Alberta Sewer Pipe Co. was organized last summer with the following officers: President, E. H. Crandall; vice-president, John Breckenridge; secretary-treasurer, Dr. R. B. O'Sullivan; directors, A. Allan, P. Turner Bone, A. M. Grogan.

PLEASED WITH OUTLOOK.

A spirit of optimism has pervaded the sessions of the Canadian Manufacturers' Association, who have held their annual convention at Toronto during the week. At the business meetings and among the informal gatherings in the rotunda, talk has constantly turned upon the present industrial prosperity of Canada, and the almost certain prospects of its continuance.

During the past year, business in the United States has been none too good. In fact, it has been frankly disappointing to manufacturers in almost every line. In former times, slack business conditions in the United States have invariably had serious effects upon Canadian industries. In this last year, except in some isolated cases, Canada has scarcely felt the prevailing depression across the border. It is, therefore, a matter of warm congratulation among the manufacturers of this country that the situation in Canada is so encouraging.

It has been repeatedly stated, within the past year, that Canada is, to-day, the most prosperous country in the world. With millions of acres of fertile land yet to be cultivated, and with untold mineral resources yet to be developed, it would seem that nothing short of incapacity on the part of executive heads can check the prosperity of Canadian manufacturers.

MAY ESTABLISH INDUSTRY.

Harry Tuill and W. H. Hartin, both of Medicine Hat, are carrying on negotiations which have been taken up with the city regarding the establishment of an industry for the manufacture of gas well drilling machinery and heavy forgings. Estimated cost, buildings—\$15,000; machinery—\$50,000.

AT HEAD OFFICE.

F. T. Rawley, Canadian manager of the Honeywell Heating Specialty Co., has been visiting the company's home office at Wabash, Ind.

PLUMBING AND HEATING MARKETS

MONTREAL.

Montreal, Oct. 11.—Surely these are strenuous days for the manufacturers and the jobbers. They are finding it necessary to rush in every direction. Orders are coming in so fast that the reserve stock has been depleted, and the immediate product of the factory has to be put on sale. Moreover, this immediate product is not sufficient to meet the demand. In practically every line delays in filling orders are absolutely necessary. There simply are not the supplies on hand to fill the wants of the architects and the contractors.

This represents a healthy condition of trade, yet it means vexations to many. It means that plumbers are finding difficulty in completing work on schedule time. It means individuals are being compelled to wait for the installation of their fixtures. How the situation could have been avoided is a little hard to say. Perhaps the manufacturers might have produced more goods in the quiet season. But they did not know then that the demand would be so heavy and so insistent. Moreover many managers state that they did produce as much as they were able.

It seems the present rush is attributable more to general prosperity than to any other cause. Many new buildings have gone up in Montreal and all over the Dominion. They must be equipped with enamelware, with plumbing, and with heating fixtures. So the wholesale houses are being deluged with orders.

Enamelware.—The busiest season of a busy year has now well commenced. New buildings have come to that stage where the lathing, plastering and plumbing has been done. All is ready for the equipments. Architects and contractors are ordering these in large numbers. Some, who were wise enough to make their wants known early in the season, are getting prompt delivery. Those who have delayed until the last are being forced to wait. This is one of those places where scripture is not fulfilled. The last is not first.

Montreal houses are selling not only within the city, but are being called upon to fill orders from the west—from even as far west as British Columbia. There the building boom has resulted in many structures being completed at practically the same time. As a result great numbers of fixtures are required. The enamelware manufactories turned out great quantities in the spring and winter; and they have been working at full speed all summer, yet the demand can not be promptly met.

Boilers and Radiators.—The business in this line, heavy last week, is much heavier now. At supply houses those ordering are being frankly told that prompt delivery can not be assured. Said one sales manager: "We had a fine stock both of boilers and radiators. We thought we would be able to fill all our orders promptly. But the demand has been too great. Our reserve supply is gone. We are selling now practically from the factory to the contractor."

Soil Pipe.—Here there is a near famine. The wholesalers have little or none of this material on hand. The factories, though running up to full capacity, can not begin to fill the demand. The pipe is being turned out in great quantities, but it is sold practically as soon as made. Discounts quoted are generally as last week, that is: Heavy pipe, 70 and 10; 7 and 8 inch pipe, 50; light pipe, 60 and 10; fittings, 75.

Lead Pipe.—Here too there is a scarcity, due to the scarcity of lead. Prices remain as last week, but the feeling that a rise may come seems to be generally entertained. Everything, indeed, points to this. The likelihood of an increase in price has no doubt something to do with the great demand. Dealers are anxious to get as good a supply of pipe as possible before a jump occurs.

Iron Pipe and Fittings.—Galvanized pipe of the $\frac{1}{2}$ inch size is especially sought. It is scarce now, and contractors seem bent upon getting every foot available so that they may have a stock when the supply becomes even more limited. The mills are producing all possible, but they seem unable to keep up with the orders.

Discounts generally quoted are: On malleable fittings, 40; cast iron, 60; flanged unions, 65; nipples, 75 and 10; malleable lipped union, 65 per cent.

Solder.—A strong demand, with supplies enough to enable prompt delivery, is reported here. Prices continue firm.

Tin.—The upward tendency continues. From those in close touch with the primary market comes the prediction that a bull campaign has been planned for October and November, by those who practically control the tin situation. "If a drop occurs," says a local expert, "it would seem good business for all needing a supply to buy."

TORONTO.

Toronto, Oct. 14.—Business is so brisk that the manufacturers and supply men are kept at high pressure to meet the demand. This is equally true of both the sanitary and heating lines. The demand is heavy from all parts of

the country, indicating that activity is the prevailing condition in the trade. There has been a surprisingly good demand from the rural sections.

The supply men state that, despite the big demand, they have been able to fill all orders with promptitude so far as the standard models and sizes go. It has been found difficult to get some special orders through and, in a few cases, a delay of a month's duration has resulted.

Enamelware.—Big shipments of enamelware are now the order of the day. Advise orders placed as far back as three and four months are now being filled and, in addition, new business is coming in with every mail. "As much business as we can safely handle," said one supply man. "We are shipping out more now than at the same time last year by a good 30 per cent. We find that the demand for good quality stuff is improving most noticeably."

Boilers and Radiators.—October is going to prove a record month in the heating line. One manufacturer declares that he has already put out more boilers since September 1 than he did during the whole of September and October last year. Members of the trade are finding business brisk judging from the demand that the manufacturers and supply men are meeting now. Prices are reported to be firm.

Soil Pipe.—The demand for soil pipe is still brisk, though not nearly so much difficulty is being experienced in getting supplies as two weeks ago. The supply men seem to have caught up with the demand, although large orders are still being placed. "We can predict big business for some weeks yet," said one man. "It is still somewhat of a problem getting enough to supply all our customers, although supplies are coming forward better." Quotations on medium and heavy soil pipe are: 70 and 10. On the 7 and 8-inch sizes, the discount stands at 50 per cent.

Lead Pipe.—Although the lead situation is about the same as at last writing, the predicted advance in the price of lead pipe has not come about. The supply men have, however, added to their price for orders where lead waste and pipe have to be cut. Lead pipe is still selling at 27½ cents. Lead waste sells at 9c per lb. and caulking lead at 4½ cents. Traps and bends are quoted at 50 per cent. discount.

The price of lead continues to soar and supplies locally have become very low. However, a turn for the better is now hoped for and it is possible that no further changes will result in the price of lead pipe.

THE "LEIGHTON"

Enameled Pedestal

LAVATORY, \$110

Graceful in design, neat in appearance, and worthy of a place in the best bath room. Two sizes, 18x27 and 22x33.

We carry in stock many others equally as good.

Full line of Plumbing Supplies

The National Plumbing Supply Company

115-119 Adelaide Street W. - - LIMITED
TORONTO



KERR

Steam and Hot Water RADIATOR VALVES

are past the experimental stage.

They set the standard for high quality in material and finish and stand the many tests of use.

Note the seats in Kerr's New Pattern J.D. Radiator Valves which insure perfect drainage.

The Kerr Engine Co., Ltd.

VALVE SPECIALISTS

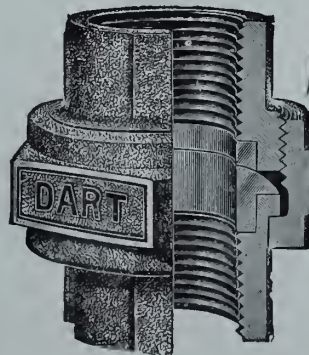
Walkerville - - Ontario

**THE BRONZE TO BRONZE GROUND
JOINT THAT CANNOT LEAK**

DART UNIONS

Stay tight until deliberately loosened and make joints time after time, for the bronze faces of the joint cannot rust or corrode. First cost the only cost.

Add these Unions to your stock. They are trade winners, satisfaction givers. Use them, they will save you time and expense. Your jobber has them.



Dart Union Co.,
LIMITED
TORONTO

Condensed or "Want" Ads.

BUSINESS CHANCES.

WANTED—A Plumber or Steamfitter to buy a half interest in Plumbing and Heating Business. Middle west. Box 514, PLUMBER AND STEAMFITTER, Toronto. (20)

PLUMBING, Heating and Tinsmithing Business for sale in best town in Canada. Satisfactory reasons for selling. Established six years. Stove business in connection. Apply Box 592, PLUMBER AND STEAMFITTER, Toronto. (19tf)

SITUATION VACANT.

WANTED—1 first-class tinsmith and plumber. Steady work and good wages the year round to the right man. Married man preferred. FRANK L. DUGGAN, Stratford, Ont. (20)

MISCELLANEOUS.

ADDING TYPEWRITERS write, add or subtract in one operation. Elliott Fisher, Limited, Room 314, Stair Building, Toronto.

ACCURATE COST KEEPING IS EASY if you have a Dey Cost Keeper. It automatically records actual time spent on each operation down to the decimal fraction of an hour. Several operations of jobs can be recorded on one card. For small firms we recommend this as an excellent combination—employers' time register and cost keeper. Whether you employ a few or hundreds of hands, we can supply you with a machine suited to your requirements. Write for catalog. International Time Recording Company of Canada, Limited; office and factory, 29 Alice Street, Toronto.

BUSINESS-GETTING Typewritten Letters and real printing can be quickly and easily turned out by the Multigraph in your own office—actual typewriting for letter-forms, real printing for stationery and advertising, saving 25% to 75% of average annual printing cost. AMERICAN MULTIGRAPH SALES CO., Limited, 129 Bay St., Toronto.

COPELAND-CHATTERSON SYSTEMS—Short, simple. Adapted to all classes of business. The Copeland-Chatterson Company, Limited, Toronto and Ottawa. (tf)

COUNTER CHECK BOOKS.—Write us to-day for samples. We are manufacturers of the famous Surety Non-Smut Duplicating and Triplicating Counter Check Books and Single Carbon Pens in all varieties. Dominion Register Co., Ltd., Toronto.

COUNTER CHECK BOOKS—Especially made for the plumbing and steamfitting trade. Not made by a trust. Send us samples of what you are using—we'll send you right prices. Our holder with patent carbon attachment has no equal on the market. Supplies for binders and monthly account systems. Business Systems, Limited, Manufacturing Stationers, Toronto.

DOUBLE your floor space. An Otis-Fensom hand-power elevator will double your floor space, enable you to use that upper floor either as stock room or as extra selling space, at the same time increasing space on your ground floor. Cost only \$70. Write for catalogue "B." The Otis-Fensom Elevator Co., Traders Bank Building, Toronto. (tf)

EGRY BUSINESS SYSTEMS are devised to suit every department of every business. They are labor and time savers. Produce results up to the requirements of merchants and manufacturers. Inquire from our nearest office. Egray Register Co., Dayton, Ohio; 123 Bay St., Toronto; 258½ Portage Ave., Winnipeg; 308 Richards St., Vancouver.

FIRE INSURANCE. INSURE IN THE HARTFORD. Agencies everywhere in Canada. (tf)

HUNDREDS OF TYPEWRITERS of every make and condition are being traded in as part payment on the famous MONARCH. Price and quality are the levers we use to prevent over stock. We believe we can give the best bargains in rebuilt typewriters in Canada. A postal will bring our catalogue and full information. The Monarch Typewriter Co., Limited, 46 Adelaide Street West, Toronto.

KAY'S FURNITURE CATALOGUE No. 306 contains 160 pages of fine half-tone engravings of newest designs in Carpets, Rugs, Furniture, Draperies, Wall Papers and Pottery with cash prices. Write for a copy—it's free. John Kay Company, Limited, 36 King St. West, Toronto.

MOORE'S Non-Leakable Fountain Pen. If you have fountain pen troubles of your own, the best remedy is to go to your stationer and purchase from him a Moore's Non-Leakable Fountain Pen. This is the one pen that gives universal satisfaction and it costs no more than you pay for one not as good. Price \$2.50 and upwards. W. J. GAGE & CO., Ltd., Toronto, Sole Agents for Canada.

MODERN FIREPROOF CONSTRUCTION. Our system of reinforced concrete work, as successfully used in many of Canada's largest buildings, gives better results at lower cost. "A strong statement" you will say. Write us and let us prove our claims. That's fair. Leach Concrete Co., Limited, 100 King St. West, Toronto.

PENS—The very best Pens made are those manufactured by William Mitchell Pens, Limited, London, England. W. J. Gage & Co., Limited, Toronto, are sole agents for Canada. Ask your stationer for a 25c. assorted box of Mitchell's Pens and find the pen to suit you.

THE "Kalamazoo" Loose Leaf Binder is the only binder that will hold just as many sheets as you actually require and no more. The back is flexible, writing surface flat, alignment perfect. It cannot get out of order. No exposed metal parts or complicated mechanism. Write us for booklet. Warwick Bros. & Rutter, Ltd., King and Spadina, Toronto.

THE money you are now losing through not having a National Cash Register would pay its cost in a short time. Write us for proof. The National Cash Register Co., 285 Yonge St., Toronto.

WAREHOUSE AND FACTORY HEATING SYSTEMS. Taylor-Forbes Company, Limited. Supplied by the trade throughout Canada.

ONE of the most successful retailers of late years says: "When a firm advertises in trade papers it is getting into good company. As I pick up one of a dozen of these periodicals here in my office, and glance through it, I find that the best people, the successful firms, are represented in such a way as to reflect their importance in the trade."

Nature has solved the problem of distribution. It uses a multitude of agents to effect the distribution of its products.

Nature does not expect every seed to fall upon fallow ground and to take root. But, it achieves a profitable percentage upon its distribution. This is all that an advertiser has to do to reap a profitable harvest on his outlay.



Irregular Pinches!

Vulcan Vise

is not alone far superior as a tool for regular pipe and fittings work, but really "the only grip," for objects otherwise out of the question in regular bench vise.

It isn't any bigger than a box of Biscuits, and you can wind up an unfailing grip as easily as you do your clock, but in one-tenth the time.

You get a gripping service within the wide range of from 1/2 in. to 4 1/2 in. diameters, in one "handful" of tool.

You get an enduring, unbreakable-in-service tool that must in every way confirm the manufacturers' guarantee.

"I wouldn't take \$10.00 a piece for them to-day if I couldn't get another."—Moore.

They won't cost you as much!

Consult your dealer.

J. H. WILLIAMS & CO.

Superior Drop-Forgings.

77 Richards St., Brooklyn, N.Y.



DIRECTORY OF MANUFACTURERS

Plumber and Steamfitter receives, from time to time, enquiries for the names of manufacturers of various lines. These enquiries come from firms who usually intimate they have looked through Plumber and Steamfitter but cannot find any firm advertising the line in question. In many cases these firms are anxious to secure the information at once. This page enables manufacturers to keep constantly before the trade lines which it would not pay to advertise in larger space.

EMERY WHEELS.



Canadian Hart Wheels

442 Barton St. East, Hamilton
Corundum and Emery Wheels
Grinding Machines, Beaver
Oil Stones.

SHELF BRACKETS.



Will Hold Up a Shelf

That's what a shelf bracket's for
For this purpose there can be
NOTHING BETTER. NOTHING
CHEAPER than the BRADLEY STEEL
BRACKET. It is well Japanned, Strong and
Light. The saving on freight is a good profit
aside from the lower price at which the goods
are sold. Order direct or through your jobber.

ATLAS MFG. CO., NEW HAVEN



THIS IS THE DAY OF

INVESTIGATION

Get in line and let us prove
to you that the

GENUINE
Armstrong Stocks and Dies

ARE THE BEST.
Catalogue on request.



The Armstrong Mfg. Co.
317 Knewlton St.
Bridgeport, Conn.

When writing advertisers kindly men-
tion having seen the advertisement in
this paper.

FILTERS.

Anti-Splash Tap Fitters

The "Galvo" Filter and Water Steriliser
"Perfection" Fire Extinguishers

There's good money in them for hardware dealers.
Write for Prices.

The Anti-Splash Filter Co.
OWEN SOUND . . . ONTARIO

BRONZE POWDERS

BRONZE LIQUIDS

The Canadian Bronze Powder Works

Montreal Toronto
Works, Valleyfield

Send us your orders and we guarantee the
quality

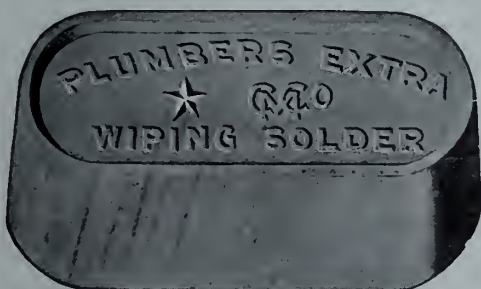
MANUFACTURERS' AGENTS.

Western Distributors, Limited CUSTOMS BROKERS

Wholesale Commission Merchants and Manufac-
turers' Agents. Cars Distributed, Warehoused
and Forwarded. Warehouse on Trans-
fer Track. Business solicited.

OUR POSITION IS YOUR OPPORTUNITY
SASKATOON, WESTERN CANADA

PLUMBERS' EXTRA STAR



IS THE
HIGHEST GRADE
WIPING SOLDER
AND IS THE SAME PRICE AS
CHEAP SOLDER

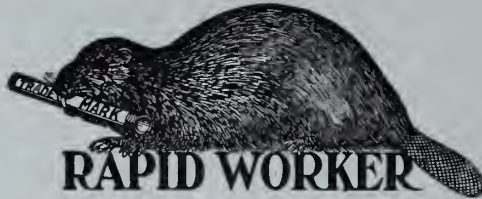
WHY NOT BUY
THE BEST?

MANUFACTURED BY

THE CANADA METAL CO., LTD.

::

Fraser Avenue, TORONTO



RAPID WORKER

One man with a Beaver Die Stock is worth two or three men with any other Die Stock made.

"Beaver" Adjustable Die Stocks

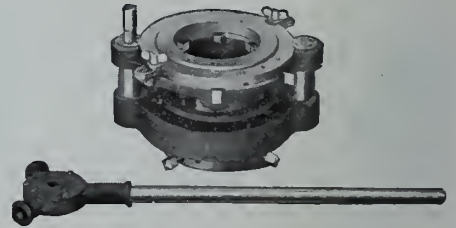
HAVE cut the cost of pipe threading in two because they will thread all sizes of pipe without changing dies. They are built on the receding principle which positively enables one man to thread any size of pipe and produce absolutely tight joints for all work, including hot water. They save the time formerly used up in changing dies and looking after loose parts, and eliminate all of thread-stripping when backing off.



No. 25A, threading 1, 1¼, 1½, 2-inch pipe.
A boy can operate it.



No. 6, threading ¼, ½, ¾, 1 inch, complet



No. 60. Uses two sets of dies. One set cuts 2½, 3, 3½ in. the other cuts 4, 4½, 5, 6 in.; they are inserted without removing any parts.

No loose Bushings or loose Dies on No 25A and No 6, and they cut 1, 1¼, 1½ and 2-inch pipes.
We can furnish a separate set of dies for 1, 1¼, 1½ and 2-inch pipe.

Write us for Illustrated Price Lists.

BORDEN CANADIAN COMPANY,
66 Richmond Street East Toronto, Ontario

The "ADANAC"

is the Newest and Best Bath Cock on the Market—the Genuine Quick Opener Lever handles but NO Fuller Balls.

**"Patent Pending
Design Registered"**

The following points are the same as contained in OUR Quick Opening Sink Cocks.

1. FIBER WASHERS ENCASED.
2. STEMS DOUBLE PITCH THREAD.
3. RAISED SEAT (same as Compression Bibbs.)
4. SPECIAL PACKINGS (same as Compression Bibbs.)



OUR GUARANTEE

"Any article of our make, proving defective through inferior metal or improper workmanship, on our part, will be cheerfully replaced with two good ones at no charge to you."

CANADIAN BRASS CO., Limited
GALT - CANADA



YOU CAN SAVE MONEY BY DEALING WITH US

Our stock of Plumbers' Supplies is one of the largest in the Dominion, and embraces all the most reliable lines, from a washer to the complete modern bathroom outfit. When you order

"Scotia" Plumbing Supplies

you get the right goods quick. You save money by getting the

Lowest Prices

consistent with good quality and by avoiding delayed or wrong shipments.

Test us with a trial order for anything in plumbers' supplies.

WM. STAIRS, SON & MORROW, Ltd.
HALIFAX

ESTABLISHED A.D. 1810

NOVA SCOTIA

The "SOVEREIGN" RADIATOR

Brings Surprising Results.

It is a **loss of time** to be **constantly repairing** radiators.

You **lose** your **customers' confidence** if they do not give satisfaction.

INCREASE YOUR TRADE by selling our High Grade Guaranteed "SOVEREIGN" RADIATORS.

The "SOVEREIGN" **always brings results** because every Valve, every Casting and every Joint is **absolutely efficient and reliable**.

Our Radiators are very Artistic and are made of the BEST GRADE MATERIALS. You will take pride in selling them.

WRITE FOR CATALOGUE AND PARTICULARS

Taylor-Forbes Co., Limited, Guelph, Ont.

TORONTO: 1088 King St. W. Taylor-Forbes Co., Ltd., 246 Craig St. W., Montreal, Que. Taylor-Forbes Co., Ltd., 1070 Homer St., Vancouver, B.C. W. R. Mathers, 46 Princess St., St. John, N.B. The Vulcan Iron Works, Winnipeg, Man. The Mechanics Supply Co., Quebec, Que.





ASTORIA

AVOID COMPLAINTS THEY EAT UP YOUR PROFITS

It is annoying after you have finished a job, to have your telephone wire kept hot with the complaints of a dissatisfied customer. This can be prevented by using reliable fittings and supplies on every job. The Morrison Line of Plumbing Supplies are thoroughly reliable. We guarantee every article we sell to be exactly as represented.

In W.C. outfits you will find these lines to be thoroughly satisfactory.

"QUALITY"

Closet Combinations

"Elgin" Washdown

"Simplex" Syphon Jet

"Astoria" Square Back Syphon Jet

All our low-down outfits are furnished with our Patent Combined Ball Cock with Shut-off Cock. This is the simplest and most efficient on the market, with full weight copper lining.

THE

James Morrison Brass Mfg. Co.
LIMITED

Toronto

...

...

Ontario

Quality Empire Extra Compression Bibbs

EXTRA Quality Metal Used
EXTRA Workmanship
EXTRA Guaranteed
EXTRA Fine Working Parts

SQUARE THREADS
ENCASED SEAT
SPECIAL PACKING



Make the Empire Extra Quality Compression Bibbs the Best on the Market.

"The Quality remembered long after the Price is forgotten."

Our name in full or the letter "E" on everything we make.

Empire Manufacturing Company, Limited, London, Ontario

Manufacturers of the Famous **EMPIRE** Closets, Absolutely Guaranteed.

PLUMBER & STEAMFITTER

and Sanitary Engineer of Canada

THE MACLEAN PUBLISHING COMPANY, LIMITED, PUBLISHERS

MONTREAL, 701-702 Eastern Townships Bank Bldg.
LONDON, ENG., 88 Fleet St. E.C.

TORONTO, 143-149 University Ave.
CHICAGO, 140 S. Dearborn St.

WINNIPEG, 34 Royal Bank Building
NEW YORK, 115 Broadway

Vol. V.

Publication Office : TORONTO, NOV. 1, 1911.

No. 21



THE STANDARD

COMPANY LIMITED
GENERAL OFFICES AND FACTORIES · PORT HOPE · CANADA



Public Lavatory

**Freeman's
HOTEL
Montreal**

Entirely composed of
STANDARD
Porcelain Enameled
Sanitary Ware

BRANCH OFFICES AND SHOWROOMS

TORONTO 119 KING STREET EAST	MONTREAL 42-44 BEAVER HALL HILL	WINNIPEG 76 82 LOMBARD ST
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PLUMBER AND STEAMFITTER

Beaver Brand

Cast Iron Enameled Ware

Unsurpassed for Pure Whiteness of Color,
Attractiveness of Design, Finish and Durability.

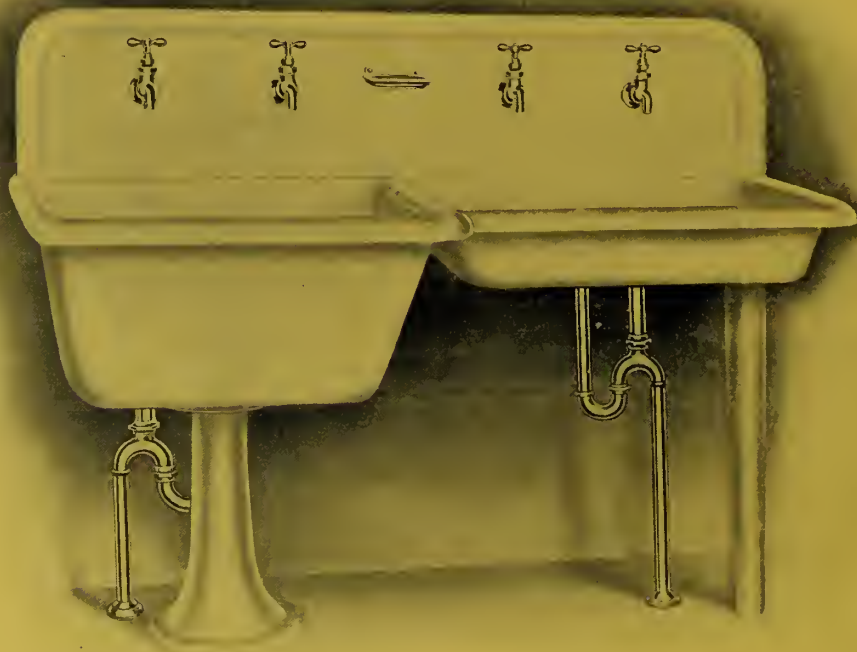


PLATE "D" 357

The above cut shows one of our latest patterns of Roll Rim Combination Laundry Tubs and Sink, with one-piece recessed back, for either left or right hand side.

This new fixture is one of our complete lines of Sinks, Baths, Lavatories, Laundry Tubs, Range Closets, etc., to which we are continually adding new patterns.

Amherst Foundry Co., Limited

General Offices and Factory: Amherst, Nova Scotia

ONTARIO:
Monarch Brass Mfg. Co.,
178 Victoria St., Toronto

MANITOBA and NORTHWEST:
E. B. Plewes,
120 Lombard St., Winnipeg

BRITISH COLUMBIA:
A. O. Campbell,
550 Beatty St., Vancouver

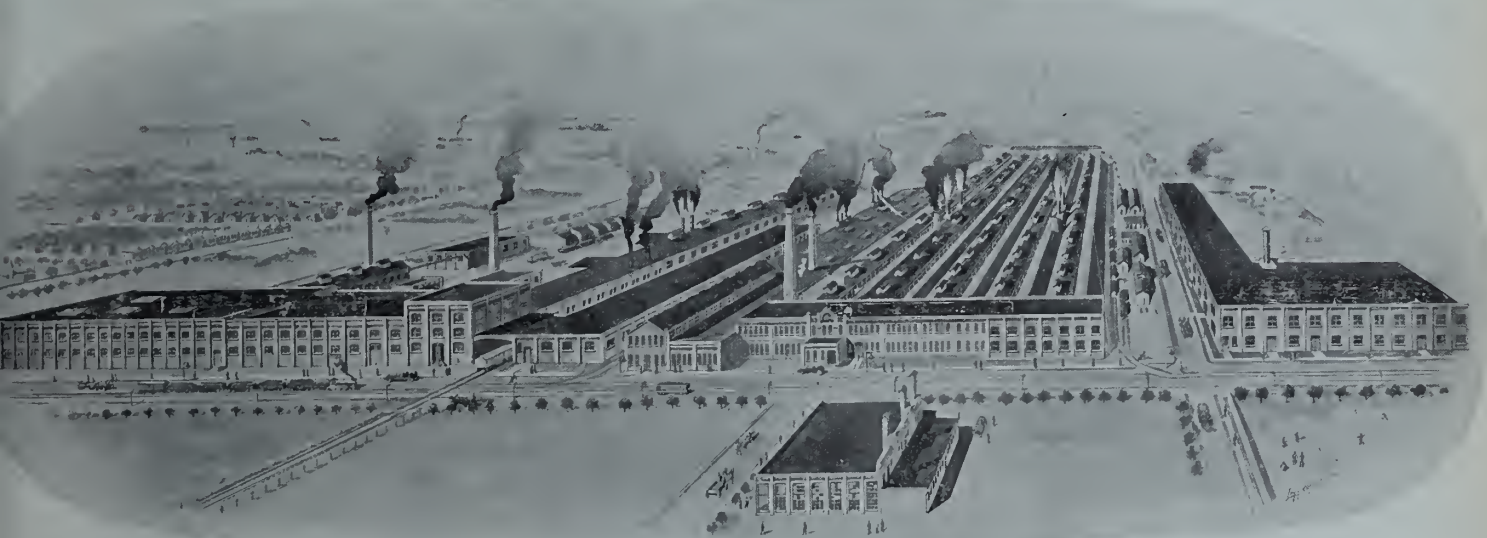
The Honeywell System of Hot Water Heating

is specified by leading architects; installed by most progressive steamfitters and insisted on by discriminating builders and proprietors. This condition is the logical tribute paid to a thoroughly efficient, well reasoned system.

The Honeywell Heating Specialty Company
WABASH, IND.

Frank T. Rawley,
Canadian Manager

Room 1008 Eastern Townships Bank Bldg., Montreal.
Phone Main 4615



Malleable and Cast-iron-pipe Fittings

MANUFACTURED BY

FITTINGS LIMITED

OSHAWA

- WINNIPEG -

MONTREAL

Our 1911 Catalogue is now ready.

WE MANUFACTURE Plumbers' and Steamfitters' Supplies



that cannot be excelled in quality and durability. Every article that leaves our works is thoroughly tested and inspected, thus insuring the customer against defects which often come to light after installation.

*We fill all orders promptly and make quick deliveries.
Try us for quality and service.*

THE GALT BRASS MFG. CO., Ltd.
Galt, Ont.

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Pertaining to Heating, Lighting, Plumbing and Ventilation. All Orders Payable in Advance.

American Steam & Hot Water Heating Practice	\$3 00	Heating & Ventilating Buildings. House Drainage and Sanitary Plumbing	50	Sanitation in the Modern Home. By J. K. Allen	2 00
American Plumbing Practice	2 50	House Heating by Steam & Hot Water. By C. B. Thompson...	3 00	Sizes of Flow & Return Steam Mains	50
American Sanitary Plumbing. By J. J. Lawlor	2 00	Hot Water Heating, Steam & Gas Fitting, Acetylene Gas—How Generated and How Used. By J. J. Lawlor and Geo. T. Hanchett	2 00	Steamfitters' Computation and Price Book. By Dean	3 00
Baldwin on Heating, or Hints to Steamfitters	2 50	Principles of Heating. By W. G. Snow	2 00	Steam & Gasfitters' Text Book..	5 00
Contract & Estimate Record Book for Plumbers. By B. H. Jessup	1 50	Principles & Practice of Plumbing. By J. J. Cosgrove	3 00	Steam Heating for Buildings. By W. J. Baldwin	2 50
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Guide to Testing Plumbing. By J. K. Allen	25	Sanitary Plumbing & Drainage. By J. W. Hart	3 00	Modern Plumbing, Illustrated. By R. M. Starbuck	...
Hints to Plumbers on Joint Wiping, Pipe Bending & Lead Burning. By J. W. Hart	3 00			Modern Sanitary Plumbing, Steam & Hot Water Heating. By J. J. Lawlor	...
				Notes on Heating & Ventilation. By J. R. Allen	2 00

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MacLean Publishing Co., 143-149 University Ave., Toronto

Over and Over Again

I have asserted that the No. 25
Nye Adjustable Die Stock

was unapproachable in its capacity for high grade work, for its simplicity of construction, its ease of action and for its strength and durability. This challenge, inspired by honest conviction, is backed up with my "free trial" offer.

There is every justification for the enthusiastic praise I lavish on this die stock, but my selling plan imposes no obligation to believe without seeing or testing the tool.

YOU ARE THE JUDGE, THE JURY AND THE EXECUTIONER—ALL IN ONE. This policy, never deviated from, has engendered and established a faith in my advertising that stands as a tribute to unequivocal statement and fair selling methods. You know just where you stand when you deal with me. If you don't like my tools I take them back. That's square, isn't it?

The No. 25 Nye Adjustable Die Stock, equipped with two sets of chasers, threads sizes from $\frac{1}{8}$ to 1 inch inclusive. These chasers are made under the Nye Skip-tooth patent, which insures great ease in cutting. They are tapped on both ends and can readily be changed in the stock.

After the thread is cut the chasers can be instantly released, avoiding the necessity of backing off over the work. They can readily be taken out and replaced. Absolutely no bearings or parts to wear out.

This Die Stock is equipped with Universal adjustable bushings, which can be opened wide enough to go over a coupling. Cuts a close nipple perfectly. Cuts over and under size or a running thread.

NYE, THE DIE MAN

THE NYE TOOL AND MACHINE WORKS, 124 N. Jefferson Street, Chicago, Illinois.



Don't Lose Your Grip

Occasionally we hear it said of a man whose success is not marked, "So-and-so seems to be losing his grip." You

can't lose your grip with a **COCHRAN PIPE WRENCH.** A job of pipe-fitting where this tool is used is an unqualified success.

Cochran Pipe Wrench Manufacturing Co.

Canadian Branch: 70 George St., Ottawa

WROUGHT PIPE

BLACK and GALVANIZED. SIZES, $\frac{1}{8}$ IN. TO 4 IN.

All our pipe thoroughly inspected, tested to 600 lbs. hydraulic pressure and branded.

Ask your jobber for



Brand

CANADIAN TUBE & IRON CO., LIMITED

Montreal

Works: Lachine Canal

TWO CENTS PER WORD

You can talk across the continent for two cents per word with a WANT AD. in this paper.



New No. 6 "KING."

Notice double shaker connection with which the larger sizes of the King Boiler are equipped.

Right lever shakes front half of grate and left rear half—One of the exclusive features of the "KING."

Wire or Telephone Your Orders for "KING" Boilers

Let us relieve you of some of your "rush-season" troubles

Every day that your work is held up now for want of boilers or radiation, not only puts a crimp in this year's profits, but will materially affect next year's business.

Every size and half-size of the "KING" Boiler up to No. 6-A is now in stock and can be shipped, if necessary, the day your order reaches us.

Try STEEL and RADIATION in an emergency and as an extra precaution against delay we would ask you to get every order in, now, as promptly as possible.

STEEL and RADIATION, Limited

TORONTO { Head Office: Fraser Avenue
Showrooms: 80 Adelaide East

MONTREAL:
138 Craig Street West

Plumber and Steamfitter

and Sanitary Engineer of Canada

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J. G. LORRIMAN }

Circulating amongst Plumbers,
Steam, Hot Water and Gas Fit-
ters, Sanitary Inspectors, Heating and
Ventilating Engineers, City Engineers,
Boards of Health, Architects, etc.

TORONTO, NOVEMBER 1, 1911

IN HIS RECENT ADDRESS at the Montreal Builders' Exchange luncheon, Professor Ernest Brown, of McGill, expressed the wish that the university and the business men could meet oftener. It seems, he stated, a desire which might be brought about with profit to all. There can be no denying that the university and those outside the university do not understand one another as they might. They seldom "get together." Sometimes they "come together," as recently in Montreal—where 200 or more students heroically rescued one of their number arrested by a lone policeman who dared to do his duty. But "get together," such an event occurs seldom.

Yet, as Professor Brown showed, business men have something to learn from the university. To begin with, the university has all the modern scientific instruments. In its laboratories tests can be made which are of importance to contractors and all builders. The effect of different conditions can be tried.

Undoubtedly the university has something to teach the business men. And equally undoubtedly, no more undoubtedly, the university has something to learn from the business men. By professors and business men meeting, each would get the viewpoint of the other. Each, as a result, would modify his viewpoint, forming one truer, more in keeping with the times.

FOR THE SIMPLE reason that the supply is not equal to the demand, there is not likely to be any fall in the price of tin for the time being at least. But one satisfactory bit of knowledge comes to the manufacturers and handlers of the metal. In the future there are not likely to be such rapid fluctuations in its price as there have been in the past, for the executive of the Metal Exchange in England has taken definite steps to prevent that. It has put on the regulations a new clause which allows dealers poorly supplied with Straits tin to fill contracts with other brands, making, of course, the proper reduction in cost.

This is a bigger step forward than might at first appear. In a measure it ties the hands of the syndicate, which has held control of the tin situation for well nigh two years, and which does not seem willing to relinquish its sway now. This syndicate will hereafter be unable to make such sharp corners, for in order to affect deliveries as in the past, it will have to control not only Straits tin, but also the other brands, with which Straits orders may be filled.

The exact result of the regulation will not be known for some time. To begin with, the rules do not come into force until February 2, and their effect will not be apparent at once. That any immediate reduction in prices will take place is far from likely, owing to the insufficiency of the supply. But at least it appears there will be a steadying of values, and should any brand of tin become more plentiful prices would drop naturally. It is the likelihood of any greater supply of tin being secured of which handlers are skeptical.

KEEP UP the good work, Ontario!

AN INTERESTING topic is introduced by the Metal Worker: "Master plumbers of Wisconsin have plans well under way for the organization of a mutual insurance company to carry their risks, which have been materially increased recently by the passage of the State Wage Compensation or Liability Act. The initial step was taken by the Master Plumbers' Association of Milwaukee at a meeting of that organization on October 5, when the preliminary plans of the mutual insurance company were formulated. These plans have since been approved by the state insurance commissioner, and it is hoped to elect officers for the new insurance company in the immediate future and then complete the plans for its incorporation. The privileges of insurance are to be open to all legitimate plumbers within the state.

"Although mutual insurance companies are no experiment in many lines of business, this, it is quite safe to say, is the first venture on a large scale in the plumbing field. Mutual insurance has proved advantageous to the farmer, for example, where the community of interest has been confined to a restricted territory and where only the real end of mutual insurance has been sought. There are cases on record in which after enjoying the benefits of mutual insurance, the insured have exhibited a desire to extend the community of interest in order to pile up surplus profits. Then, sooner or later, failure has come. With the small community of interest the problems of insurance offer no insurmountable barrier to the average business man and are generally cared for by the executive heads of the company with but little compensation other than traveling expenses."

EVERY MEMBER of the trade in Canada has good reason for thanksgiving this year.

THE SUB-EXECUTIVE of the Canadian Society of Sanitary and Heating Engineers, meeting recently in Montreal, decided to urge the Calgary officials to determine upon the exact date of the coming convention. It is generally expected this will be held during July or the early days of August, but the society's officers think the sooner the exact date is known the better. They want all to have early advice of the gathering, that they may plan their holidays to take in this trip.

One other thing the sub-executive wishes—that is, that the local associations should appoint their representatives to the Calgary convention three months before it meets. They believe the men to go should have this time in which to get thoroughly conversant with the subjects to be discussed.

The aim is a good one. Delegates should know something of the subjects which will be considered. They should be prepared to express their opinions upon these, and they can only be thus prepared if they are given time. Three months is not too much, but it means that the locals should choose their representatives about the end of March or the beginning of April.

IN THIS issue will be found a report of the second annual convention of the Ontario provincial body. More extended editorial reference will be made in the November 15 issue of Plumber and Steamfitter. Suffice it to

The Ontario Convention.

say, that the convention was a great success. There was a representative attendance, a rare degree of enthusiasm was displayed, and the work of trade organization was carried to an advanced footing. Ontario is setting an example which the other provinces should follow.

WE FEEL safe in stating that winter has really come at last. Jim Ross, of Brockville, has discarded his Panama hat.

IN THESE DAYS we do not pay nearly so much attention to "mottoes" as did our forefathers. Whether or no we lose anything by the change is a matter for debate, says an English exchange. But I came across the

Mottoes for the Trade.

following seven maxims for plumbing and heating contractors the other day and they struck me as well worth remembering:

1. This place of business is going to make a fair living profit on all work and goods, or it is going to shut down quick.

2. The owner is going to know just what those profits are and no guess-work goes.

3. Only the best of help along all lines will be employed. Dishonest people, time-killers and booze-fighters need not apply.

4. When a contract is completed it shall be settled for in full. No percentage shall be held back "to see if the job works well."

5. The business comes from our customers. Consequently no effort must be spared (within the bounds of reason) to satisfy them and make each customer a walking advertisement.

6. First-class work, only, will be permitted. Therefore consistency requires that first-class goods, only, shall be used and the best of tools employed to bring about the desired end.

7. The stationery shall be attractive and up-to-date, the show-room ditto, and a certain percentage on the entire business shall be set aside for advertising purposes.

OF LATE THE SUGGESTION has been made that architects should employ in their offices men competent to prepare plans for the heating and plumbing systems needed in the building which they are having erected.

This, say a number, would enable the sanitary and heating engineer to know exactly what was wanted, and would save him the time which he now expends drawing up plans.

There does seem a strong argument in favor of this suggestion. But let the plumber consider well before he petitions the architects to give such service. In Montreal the local association has just sent a deputation to the wholesalers, asking them to stop supplying plans for work to their customers, on the ground that this tended to put the poor plumber on an equal footing with the expert, who is able to prepare a good sketch.

The architects, if they arranged to do what some say they would, would be helping the poor plumber much as did some of the supply houses. The local associations, therefore, should think well of the cost before they urge the adoption of this innovation. It might prove a good thing for all, but let the future be studied before the first step is taken.

ON MONDAY Canadians did more damage to the race of Turkey than the Italians seem to be doing.

WHEN THANKSGIVING DAY comes around most men are inclined to review the events of the preceding year and estimate what they have to be thankful for. No matter how disastrous the twelve months may have

proven in some respects, or how many reverses may have been sustained, it is always possible to reckon up a goodly total of benefits

for which there is reason to feel a full measure of thanksgiving.

Members of the sanitary and heating trades have experienced a prosperous year. They can look back at twelve months of uninterrupted activity. Business has been good in all lines. Despite the fact that clouds of depression have hovered over the horizon of trade in the United States, the outlook in this country has remained clear and unclouded. The satisfactory condition of trade has been the inevitable result of the general prosperity which has been felt in all parts of the country.

The outlook for the future is equally bright. There is no reason to suppose that the coming year will see conditions of trade less active than during the year that has passed. There is, on the contrary, ample grounds for supposing that 1912 will see an acceleration of trade activity and a new mark set.

With a prosperous past and a roseate future to add gladness to his Thanksgiving outlook, the Canadian master plumber should be prepared to offer his heartfelt thanks on the day set aside for that purpose.

IN SYRACUSE a widower with ten children has married a widow also blessed with ten. Even in this age of gigantic mergers, this is worth noting.

Second Annual Convention of Ontario Body

Charter Secured Incorporating Body as "Society of Domestic, Sanitary and Heating Engineers of Ontario"—Interesting and Vital Matters Discussed—Examining Board Appointed.

TORONTO, Oct. 30.—With a charter, secured in the face of bitter opposition, with a representative gathering from all parts of the province and an abundance of enthusiasm, the Ontario members of the sanitary and heating trades held their second annual meeting in the Temple Building here to-day. The convention was a successful one from every standpoint and it now begins to look as if the society had been placed in a position of permanent security.

The feature of the meeting was the announcement of the securing of an Ontario charter, incorporating the body as the Society of Domestic Sanitary and Heating Engineers of Ontario—the inclusion of the word "domestic" being due to the opposition of a branch of the civil engineers who are engaged in sewer construction works and have been incorporated as sanitary engineers.

Those in Attendance.

Among those in attendance were :

J. Marshall, Twin Cities ; Fred. F. Heximer, Niagara Falls ; John Cunningham, Paris ; Geo. Ross, Brockville ; John Eggett, London ; Albert E. Gibbons, London ; W. J. Boyce, Wingham ; W. F. Mickus, Preston ; W. Brittain, C. S. Avery, Hamilton ; J. A. Caslake, Collingwood ; G. E. B. Grinyer, Harry Mahoney, A. Malcolm, F. Smith, Guelph ; H. J. Peters, Stratford ; R. J. Sturgeon, Peterboro, J. H. Warwick, F. Maxwell, Wm. Mansell, E. Lewis Legrow, W. Ralston, H. Ruddick, H. Pepper, W. C. Schultz, A. F. Passmore, G. F. Frankland, H. Aggett, G. H. Cooper, W. Boddington, T. Maxwell, H. G. Watterman, E. T. Needham, H. G. Hicks, Toronto.

Marshall in Chair.

In the absence of President Shannon through illness, Vice-President Marshall, of Port Arthur, took the chair at 10 a.m. In opening the meeting, he welcomed the delegates present and expressed a little disappointment that the attendance was not larger. "We are here for the good of the craft," he said. "If we can't get the numbers, we can't get the results. I wish that every man here

would give his efforts from now on to bring the society up to its highest possible standard. I am myself heart and soul in favor of everything that tends toward organization of the trade."

Charter Obtained.

Wm. Mansell submitted the report of the committee appointed to secure a charter for the society. The report read, in part :

"Your committee started into work soon after our appointment to fulfill the work assigned to them by holding meetings and laying down a foundation to work upon. We added to our committee some of the members of the Toronto association, being ably assisted in the work by Francis Maxwell. During our many meetings, we assembled together a constitution and by-laws, which, we think, are workable and hope will be satisfactory and beneficial to the members and which will make our future work a protection to the health of our citizens by providing that all work done by the members of this society in such a manner that it will be a credit to us. In our work of drafting out the by-laws and constitution, we were ably assisted by the executive committee of the Toronto association and with slight necessary changes our solicitor submitted them with our petition to the Lieutenant-Governor and his advisers. When they, through the Ontario Gazette, notified the public that we were applying for a charter of incorporation for a society of sanitary and heating engineers, this notice was seen by the secretary of the civil engineers in Montreal, who sent a deputation to interview the ministers of our local legislature, praying that our petitions be not granted as their society had already been granted a charter by the Dominion Government covering every known class of engineers under the sun including sanitary engineers. Here it was that the solicitor, working in our interests, showed his mettle and proved to be the man in the right place by fighting every one of their arguments to a finish. As they held a charter granted by the Dominion Government, which made it impossible for the provincial authorities to grant us a charter for a society of the same name but through his ingenuity the word "Domestic" was placed before "Sanitary Engineers" making the full title the "Society of Domestic Sanitary and Heating Engineers of Ontario." We are

glad that our work has been successful and think that the master plumbers of Ontario have advanced a step forward further than ever before. And now it is for this society to clear the atmosphere of the aroma that has hung around our calling for many years. We have been granted the power. Now let us be up and doing and any work hereafter done by any members of this society see that it is made a badge of superiority and a credit to our name as engineers, complying at all times to the sanitary laws of our province. Let us take for our motto : "If a job is worth doing, it is worth doing well."

(Signed) Wm. Maxwell,
F. Maxwell,
J. F. Frankland,
Robt. J. Shannon,
E. Lewis Legrow.

Mr. Mansell also read a clipping from the Toronto Star in which were advanced the arguments of the "Canadian Engineer" against the granting of the charter. As a counterblast, he read the announcement that the charter had been granted.

The Discussion.

"It is a matter for congratulation that our committee has done so well," said the chairman.

The meeting apparently shared that sentiment. Harry Mahoney moved a vote of thanks to the committee. The charter was the result, he said, of many years of hard work and preparation. The new name would give a great impetus to the trade. J. H. Warwick, seconded the motion, and it was carried amid loud applause.

In responding to the vote, Mr. Mansell paid a tribute to the good work which had been done by Frank Maxwell. Mr. Maxwell, he said, had been "the man behind the guns." A separate vote of thanks was tendered to Mr. Maxwell on the motion of John Eggett and Geo. Ross. "I simply did my duty," said Frank Maxwell in responding.

Old Society Disbanded.

The work of organization was then begun. Lewis Legrow moved that the Ontario Society of Sanitary and Heating Engineers be disbanded, and that all moneys owing be paid in at once. Mr. Maxwell seconded it, and the motion carried.

Mr. Legrow then moved, seconded by J. A. Caslake, that the meeting organ-

ize themselves into the Ontario Society of Domestic Sanitary and Heating Engineers, the new body to be conducted on the lines laid down in the new charter. This motion also was adopted.

Afternoon Session.

The afternoon session opened at 1.15. Dinner had been served in the building to the delegates to facilitate an early return to business.

A letter was read from John Watson, secretary of the Canadian Society of Sanitary and Heating Engineers, wishing all success to the Ontario body and suggesting affiliation with the National body.

The serious work of the convention was then started with the reading clause by clause of the constitution and by-laws, as approved by the government. The by-laws provided among other things, for an examining board and the forming of local committees.

Must be a Credit.

Wm. Mansell opened a discussion on the significance of the word "creditably," which occurred in the clause relating to the eligibility of members. All members must "creditably" conduct business to become a member—according to the constitution. Mr. Mansell thought that care should be taken to see that every member taken in was a credit to the trade. The society had the right to accept or refuse applicants.

Harry Mahoney and the chairman took up the matter, pointing out that the question would rest with the examining board. Mr. Mahoney thought that the mere fact that a man had applied for membership, would show that he had at least the desire to be creditable.

L. Legrow pointed out that there would have to be a central board of examiners, as well as local boards, to adjust all such matters.

Harry Mahoney called the attention of the delegates to the fact that under the new charter, local associations would in future be local committees.

Date of Conventions.

In discussing the date of the regular annual meetings, Lewis Legrow threw out the suggestion, that in future, conventions be held on some other day than a holiday. He believed that the society had become of sufficient importance now to devote a working day to the business of the organization. "There's no reason why we should transact our business on holidays, Saturday afternoons and Sundays," he declared. "We don't need to do anything on the cheap. It is just as important for us to attend the conventions as to look after the work of the shop."

Geo. Cooper pointed out that on holidays, low railroad rates were always

obtainable, and this served to make the attendance larger.

The Question of Fees.

Harry Mahoney and Wm. Mansell, who had been appointed a committee to investigate the question of fees, reported recommending that, in view of the annual meeting being held on Good Friday next, the clause at present in by-law be confirmed; and asking that the membership committee bring in a report at the annual meeting on this question.

The report was adopted, so that the fees for the "local committees" until the next meeting will be \$5 for every member up to ten, and \$1 for every member over that number.

Under Canadian Rules.

On the suggestion of Lewis Legrow, the rules of procedure, as laid down by Dr. Bourinot, a Canadian, were adopted. The draft of the constitution provided for following Cushing's procedure and this amendment will be made later.

Local Committees.

Harry Mahoney objected to clause No. 34, which gave to the members in any town or city who numbered ten or more the right to form themselves into a local committee, with power to draft rules to deal with the rights of the corporation in that place. This would debar the smaller places, Guelph for instance, from forming local committees. He thought that the number should be made smaller, to give the little places a chance.

Frank Maxwell pointed out that the smaller towns could form local associations if they desired.

J. A. Caslake and the chairman took the same view as Mr. Mahoney, and a motion was put, that the minimum number of members for local committees be fixed at three. On the suggestion of Frank Maxwell, the motion was withdrawn, and the matter was left over until the next annual meeting. The motion was, therefore, changed to a notice of motion.

On the motion of F. Maxwell and H. Peters, the constitution and by-laws were adopted as a whole, it being felt that it would be safer to leave all amendments until legal advice could be secured. A desire was evidenced on all hands to avoid any possible jeopardizing of the hard-earned charter, although it was recognized that the number should be reduced as soon as possible in the interests of the smaller places.

Election of Officers.

The election of officers was then proceeded with. Under the new constitution, three directors are to be elected annually, to become president, vice-president and secretary-treasurer, according to their own selection.

The point was raised at once, that the

three directors should all be Toronto men. It was recognized on all hands that the work of organization had only just begun, and that it would be better to keep it in the hands of the men who were familiar with the details, and who could be called together at a moment's notice. The fact that the next convention is only six months off, added to the desire to get the organization work done at once. The offices will then be given to outside men. This arrangement suggested and heartily concurred in by the outside delegates.

The first ballot resulted in the election of Wm. Mansell, Harry Mahoney and Garrett Frankland, as directors. They withdrew to select officers, and returned with the announcement, made by Harry Mahoney, that acting on his (Mr. Mahoney's) advice, the resignations of both himself and Mr. Frankland had been tendered, it being felt that the work should be left in the hands of the men who had undertaken it and carried on so successfully up to date. "I know I am throwing away an honor," said Mr. Mahoney, "that does not come often to a man. But it will be in the interests of the society."

A ballot was cast, therefore, electing Wm. Mansell, Frank Maxwell and Lewis Legrow, as directors. They withdrew and elected their officers as follows:

President.—Lewis Legrow.

Vice-president.—Frank Maxwell.

Secretary-treasurer.—Wm. Mansell.

Corr.-Secretary.—G. F. Frankland.

The chairmen of committees were then elected as follows:

Sanitary.—A. Malcolm, Guelph.

Heating.—H. G. Waterman, Toronto.

Arbitration.—John Eggett, London.

Auditing.—Geo. Ross, Brockville; H. G. Peters, Stratford, and W. Heximer, Niagara Falls.

Legislative.—H. Mahoney, Guelph.

Apprenticeship.—J. Marshall, Port Arthur.

Educational.—H. Hicks, Toronto.

Examination.—J. Eggett, London.

In connection with the last committee, the chairman will solicit opinions from all members on the make up of the examination papers.

President Legrow then took the chair, with a few suitable remarks, and the next fifteen minutes were consumed in the collection of dues.

Harry Mahoney raised the question of whether the body should join the National. He believed that at the convention in Calgary next year, the National body would arrange to get a Dominion charter. They believe they should become a part of the national body, but it was just a question whether they should do so before or after the National went about securing a charter.

Oppose Two Year Term for Officers

Sub-Executive of Society Thinks it is Better to have Elections Every Year—A Gathering Once in Two Years Would Not be Enough—Wants Date of Calgary Gathering Fixed—Delegates to This Should be Elected Three Months Ahead—Much Business Done.

Frank Maxwell expressed the opinion that the assessment was heavy now and that they should go slowly. He suggested appointing a committee.

He moved, seconded by Mr. Bodding-ton, that the directors draft a report for the next convention on this subject. The motion carried.

J. A. Caslake moved, J. Eggett seconded, that Mr. Watson's communication be received, and that a letter be drafted to him, explaining how matters stand.

To Have Certificates.

On the motion of Frank Maxwell and Harry Mahoney, the matter of having certificates printed to be given to all members in good standing was left with the directors.

On the motion of Messrs. Mahoney and Eggett, the directors were authorized to issue printed copies of the constitution and by-laws to each paid member.

R. G. Sturgeon suggested having a button to be worn by each member. The idea was left over until the next meeting.

Addresses were given by C. S. Avery, Hamilton; Thos. Phillips, Orillia; J. Marshall, Port Arthur, and W. J. Boyce, Wingham, explaining how matters stood in their respective places.

Convention Notes.

A wire was received from President Shannon, explaining that illness had necessitated his departure from the city. Much regret was felt at his absence.

Before the convention opened in the afternoon, Wm. Mansell, on behalf of

Montreal, Oct. 28—The President of the Canadian Society of Sanitary and Heating Engineers is not to hold office for two years. Not if the sub-executive committee of the association can prevent. This was decided at this week's meeting of the sub-committee, when former President Cooper's report came up for consideration.

Mr. Cooper, it will be remembered by those who were present at Fort William, and by those who read of the work there done in Plumber and Steamfitter, advocated the election of officers not for one but for two years. This, President Walsh, Secretary Watson, and Provincial Vice-president Thibeault, who make up the sub-executive, thought would be a wise move if there were Provincial Associations doing active work. But there are few of these, and it was therefore decided that much better results will be obtained by having the Canadian society meet every year, and having the officers elected at these meetings. This recommendation will be made at the Calgary gathering.

Much Work Done.

But this was only one of many subjects discussed. The sub-committee had a great deal of work to get through and took up subject after subject in rapid succession.

The recommendation that the society should take some steps to check the invasion of master plumbers from the U.S.A. was referred to the legislation committee, which was instructed to prepare a report, to be submitted at the coming convention.

The question of a Dominion directory of the C.S. of S. and H. E., brought out the fact that John Watson, the secretary, has already done a great deal of work preparatory to the preparation of this booklet. The intention is to include not only the names of plumbers, but also those of architects and manufacturers of plumbing supplies. This means a great deal of labor. Mr. Watson has hoped to get the lists from the provincial vice-presidents, but so far few have given the assistance for which he has asked. The committee advised him to write the provincial heads again, urging the need of prompt co-operation.

When is the Convention?

In connection with the report of the former vice-president, James E. Walsh, the secretary was instructed to write to Vice-president Young, of Calgary,

suggesting that the exact date of the coming convention be fixed. It was felt this should be known at once, so that the various local organizations might name the delegates who will represent them. It is hoped to have all these appointed three months before the time set for the gathering in Calgary, so that all going will be able to familiarize themselves with the subjects there to be considered.

The appointment of a salaried secretary was also considered, the sub-executive finally determining to leave this matter in the hands of the elected secretary, he to make the appointment when he deems this necessary.

Expenses of Organizers.

A question of organization had been brought up by Vice-president Dexter, of Nova Scotia. He had written, stating that it was practically impossible to do any organizing work without incurring rather heavy expenses. He thought some provision should be made by the society for these. The truth of this was felt by all, and upon investigation, it was found that the constitution, as it now stands, does allow each vice-president \$25 for expenses. The secretary was instructed to advise all the provincial leaders of this.

The business which must be transacted was only touched at this meeting, and the sub-executive determined to convene every Wednesday, until all the reports read at the last convention have been considered, and until the revision of the constitution is made.

CONDITIONS ARE BAD.

The Vancouver Province says:—"It is to be hoped that the representations of the Grandview Progress Association may have some effect in stirring the civic board of works and department of health to a sense of seriousness of the conditions, in several parts of the city, resulting from the absence of sanitary methods. It will scarcely be seriously disputed that the prevalence of sickness among children, which has caused the closing of rooms in several of the schools, is directly traceable to this cause. Even in those quarters where the sewers have been put in recently, the conditions are still bad—whether from improperly destroyed septic tanks or other causes is a matter which should be determined by the authorities



Jack Marshall.—"Anybody want to buy a watch?"

the delegates to the National Convention at Twin Cities, presented Jack Marshall with an alarm clock. The latter's well known desire to dispose of a timepiece, gave a humorous point to the presentation. Jack accepted it with a bright address of acceptance.

In Handsome New Quarters

No surer evidence of the advances that the trade is making can be found than the tendency to acquire and maintain better business premises. The days of the little junk shop have passed. The up-to-date sanitary and heating engineer now needs to "present a good front" the same as the retail merchant.

A cut of the establishment of the Windsor Hardware Co. at Windsor, Ont., is shown. The business has been making rapid strides under the progressive direction of White & Billings, the proprietors. Their store and workshops are situated in a fine new block, which overlooks the Detroit River, and commands a magnificent view, as well as occupying a strategic business location.

The firm do a large business in heating and sanitary work and keep a staff of 25 or more employees at all times. Part of the staff are to be seen in the illustration. They also have a thoroughly up-to-date hardware store. The plumbing offices and showrooms are shown at the rear in the illustration, with a separate entrance and three good-sized show windows.

The other illustration shows the new business establishment of Andrew Fulton, Enderby, B.C., reference to which was made in the last issue. He has very creditable quarters and is doing a good business in plumbing and tin-smithing.



The Premises of Andrew Fulton, Enderby, B.C.

A New Machine for Chlorination Invented by Waterworks Engineer

Toronto, Oct. 25.—Fred Henning, chief engineer of the filtration plant, has perfected a mechanical device for chlorinating the sewage effluent from the Morley avenue plant when it is put in operation. Mr. Henning invented an apparatus for chlorinating the Island water supply, which worked satisfactorily there and in the West Toronto pumping station. This apparatus was attached to the piston of the engine. When the

piston made a stroke, pumping so much water, the apparatus threw a jet of diluted chlorine. Thus the operation of chlorine to the total volume of water was always constant.

He has contrived an entirely different device for the Morley avenue plant, because there no pumping of sewage effluent will be done.

"I gave the plans to Ald. Rowland, chairman of the Board of Health," replied Mr. Henning to a question as to



The New Store of The Windsor Hardware Company.



F. H. Henning.

the way his machine operated. "I do not feel at liberty to say anything for publication, but I think it will do the work."

The machine will cost \$2,000. This does not include chlorine and employees, which will require \$45,000 more.

Plumbers Can Get Share of Christmas Trade

Mirrors, Tooth Brush Holders, Soap Holders, Towel Racks and Other Bathroom Appliances Appeal to Many—Useful Gifts are in Favor Now—The Plumber Must Show These Lines in Attractive Form—He has Allowed his Window to Lie Fallow Long Enough.

Now that the shopping season for the glad Christmas time is approaching, plumbers generally will be anxious to accumulate as much of the gladness—in the shape of profit-giving business—as they may.

But how is this to be done? Plumbing has never been considered a line in which a strong appeal can be made to the Christmas shoppers. A plumbing store has been regarded as a place to go for necessities, and 'necessities' have not been in favor as presents. But of late the conditions have changed. Plumbing establishments have undertaken to handle many new lines, which are really more luxuries than necessities, and Christmas shoppers have come to realize that an article is not taboo as a present because it has some practical use. Indeed, it is the gift which meets a real need which is in especial favor at present. This is a practical age, and velvet slippers and shoe bags, for men who habitually throw their boots under the bed, are out of style.

Must Arrest People's Attention.

So there is plenty of opportunity for the plumber to make a good profit at the coming holiday season. All he has to do is to determine upon the goods which he may well sell. Then he must bring these to the attention of the people. As has been said, people have regarded plumbing establishments as places where they get only necessities. They must be educated to realize their mistake. The goods which have value as presents must be attractively displayed. To them attention must be called.

From talking with plumbers it is evident that a number of them have gone after the Christmas trade in the past. They are going after it again this year. Just how may be of interest to others who to date have not made any great effort to secure a part of the holiday season profits.

What One Man Found.

"There are many articles," said one successful plumber, "which I have found exceedingly good sellers at Christmas time. Take mirrors for instance. There are many of these made now which match porcelain bathroom fixtures. Now that makes a fine present for a man. It means he will be able to shave in the bathroom, where he can

have hot and cold water. I've found these mirrors appeal strongly to women. Why, they are giving themselves a present at the same time as they are remembering their husbands. They are making a gift which will render it unnecessary for the man to shave in the bedroom.

This is only one of many bathroom fixtures which are suitable for presents. Another is a tooth brush holder. Every one who has lost this necessary toilet equipment would appreciate such a fixture. Talk about getting out of the wrong side of the bed—that doesn't give half the grouch that does an early morning hunt for the elusive tooth brush. So, again, a woman is making a present to the entire family by giving some member a tooth brush rack.

Lighting Fixtures Good Too.

Then there are towel-racks and soap-holders, suitable as gifts for the mistress of the house. There are also new equipments for the bath. Bath mats and all the other paraphernalia.

Even without lighting fixtures, which now are handled by many plumbers, presents in numbers may be secured in plumbing stores. But these fixtures offer to the dealer other opportunities. At the Christmas season he can sell many of these. Anyway, people are anxious to beautify their home. It is one of the desires which is common to men and women alike. So fixtures practically sell themselves, providing of course people's attention is called to them.

Where Some Fail and Others Succeed.

This getting the attention of the people is absolutely necessary, and is a point which many plumbers overlook. They seem to think that it is not essential for them to make their stores attractive. That is the reason many lose trade to the department stores, or to the larger establishments which never lose sight of the importance of making their show rooms attractive.

"I have regularly arranged a window with mirrors, tooth-brush holders, soap-holders, towel racks and goods of that kind," stated one plumber. "It has caused people to pause. They would read the cards which I inserted, telling about the goods, and suggesting where they might be placed as Christmas presents. Often they have come in and

made purchases. I know they have for they have asked the clerks to show them some of those mirrors displayed in the windows."

Now is the Time.

Such displays should be made now. It is the season for them. Let the porcelain bath be relegated to the back of the store for a time at least. Everyone has come to know that such goods may be purchased in a plumbing shop. Let them see that the other lines—the smaller, more seasonable lines—are to be had there too.

Undoubtedly the plumber has not paid enough attention to his windows—those eyes not through which he sees the people but through which the people see his stock. Too many stores there are where the display is the same, month in and month out. That is the store which is not getting all the trade it might.

Now is the time to dress windows to catch the holiday trade. Plumbers, get busy.

Will Investigate School Sanitation

It is understood, that Toronto investigation may take a wider scope, and that the question of school sanitation will come under Judge Winchester's searching eye. Information has reached the judge that the sanitary conditions in some of the schools constitute a menace to the health of the children, and that unless something is done to remedy the plumbing defects an epidemic of disease will be the result.

In one of the east end schools the fumes from the sewer have free access to the class rooms, because of the defective operation of the traps. Similar conditions have been discovered in other schools.

The Toronto Board of Health were instructed some time ago to investigate complaints about the sanitary conditions in certain schools, but their report has not yet been submitted to the Board of Education. Considerable criticism is being directed against the City Health Department for not giving this important matter their immediate attention.



POINTS ON HEATING

By
CHAS. H. DENISON



Chapter 17.

Fore and rear, from "Dan to Beer-sheeba" for some years back, the plumbing and steamfitting fraternity have been razzle-dazzled regarding their deficiencies. Perhaps I have taken a whack at some things manifest, myself; but nevertheless, the idea struck me the other day, that I never yet had tried to tell what the plumber and steamfitter really was.

So let's elimb over and look at it from an optimistic point of view. Let's see if we cannot find a few things that may be said of what the plumber really is, instead of talking in this article of things that he isn't.

Looking at him (the journeyman) from a physical point of view, he is generally some "husky," and unless he messes around with things that he should not, he can be relied upon to be the possessor of a pretty fair sample of good health. His work is outside, inside, down stairs and in the ladies' parlor. Variety, you see, doesn't give him a chance to rust out and keeps him lively on his pins.

Another thing, he can wear out all his old clothes at work. In some trades and business this is impossible. He is also in one of the best protected trades that exists, or has existed for the past several hundred years, many kinks to the contrary notwithstanding. He is also connected with a business that is constantly increasing. There are easily ten heating (steam or hot water) jobs where there was one say twenty years ago, and the present increase in building will make more heating business in the future.

When a mason starts to build a wall, there is nothing between himself and high heaven, except, perhaps, the crown of his hat, or a thatch of hair on his head. The steamfitter in running his pipes most generally has some point near which he expects to arrive. To be sure, he sometimes makes a bad miss of it, but there are various causes. Anyway, he is not the only one on the works that has trouble. Examine some of the joints that the carpenter left, and you will see that you can light elsewhere with some of your fault-finding.

The plumber and steamfitter have been spoken of, in many cases, as somewhat

uneducated parties. Suppose they are? I have talked with many and most of them tell about the same story, with respect to this part of the proposition: viz., that they left school early because they had either to support themselves or assist in helping out the family.

A strong boy, reasonably active, and with a fair share of common sense, will turn to either of these trades, because the wages are good, just as soon "as he can make himself useful.

This has brought to the trade a class of men, some of whom are minus much book "learning," and, "by gum," when you see the use that some parties have made of their education, you'll wonder if all this book knowledge is just what it is cracked up to be. Don't think by that remark that I am "knocking" technical knowledge.

A practical man could put in a ten or twenty radiator job all right; but if he attempted to put in a two or three hundred radiator job with no greater knowledge than he possessed from the smaller job, he would be apt to find himself up against it in short order.

Until the past few years, the training of those in our line of trade and business, has been that which was received from direct contact with daily jobs and affairs as they came up in the shop. This line of instruction, spliced on a man, or boy, with little, or a limited amount of training in the public schools, has tended to produce a class of men who are prone to read little, study less, and who are very independent.

Just the same, they are free-handed and good hearted. There isn't a craft in existence that I know of where "the boys" will help one of their number quicker, nor to a greater extent, be it an acquaintance or a stranger, than this same plumbing and heating deal, and that, too, knowing that they stand a good chance to get back never a red cent of their money loaned. Sometimes they get it back, but it ain't usual.

There are black sheep in every flock to be sure, but you'll have hard work to convince me that our trade is entirely on the blink, when we have hundreds in it who will split their last two-bits, if necessary, with a partner in distress.

Ever notice this trait? Ask him (the workman) if he has ever done a job like the one you are sending him on? Why, yes, to be sure. He just eats such jobs alive, as it were. Perhaps he hits it, possibly he misses the thing a mile. The point is, that he has the confidence to go ahead and tackle the job, no matter whether or not he ever worked on or saw one just like it.

Now that same go-ahead-and-get-there-some-way attitude is worth just about as much to a man in this life, as anything he possesses. If it is used with horse sense and a good memory, it will win more times than it looses; I am not talking about the confidence that comes from blamed ignorance, but I do refer to the good, clean grit, that will enable a man to find a way out of a difficult place, and such affairs happen every week in our craft.

As a class, plumbers and steamfitters are becoming better posted, better citizens and better business men. Compare what may be called a first-class shop of to-day, with what you can see (in your memory's eye), as a first-class shop or business of fifteen or twenty years ago.

Can you then say, honestly, that there has been no improvement? Are we not doing things on a broader basis, with better results and greater care? Are there not many redeeming points in the plumber and steamfitter after all? I have not mentioned them all by a long shot. There are others which I want you to recognize for yourselves, and this you want to strive to ascertain, just to get out of the habit of always looking on the wrong side of things. It's a bad habit and one that will bear watching.

Municipal Undertakings.

Wilkie, Sask., will expend \$35,000 on waterworks.

An incinerator plant, to cost \$34,650, is being built at Ottawa.

Calgary ratepayers will vote on a by-law to raise \$400,000 for waterworks.

Work has commenced on the erection of an asylum at North Battleford, Sask. It will cost \$460,000.

Plans are being prepared for an intake at Saskatoon, Sask., to supply a 4,000,000 gallon filtration plant.

Some Reasons Why National Code is Needed

Confusion Which Results From the Efforts of Amateur Legislators to Draw up Sanitary Ordinances—Dominion or Provincial Action is Needed—A Movement Started in British Columbia.

IT is acknowledged on all sides that the need for a revision of plumbing ordinances is very great. The one great objection, of course, is the lack of uniformity in sanitary codes in different parts of the country, which leads to confusion. Paradoxically enough, there is also the objection to be raised that in a great many cases the codes are too much alike.

An explanation will be in order. When a city or town decides that a sanitary code is necessary, a committee is set to work to investigate and draw up suitable ordinances. The committee is, in practically every case, composed of a local plumber or two and a few members of the council or the local board of health. Although some of the members will be well versed in the practical end of it, it is not likely that any of them will have made a special study of the case. In lieu of other information, therefore, they gather the printed ordinances of other places and chop out clauses here and there, translate them holus bolus to their own draft and thus make up a code composed largely of borrowed clauses. It thus happens that many of the commonest mistakes and the weakest regulations are distributed all over the country.

The Quality of Vagueness.

Another great fault is the extreme vagueness of many municipal codes. "In a manner satisfactory to the health officer," and "after receiving the approval of the local board of health," are among the glib, and practically meaningless phrases with which the amateur law makers, who generally have the drawing up of sanitary ordinances, gloss over their ignorance. If a point comes up where they are uncertain as to what should be done, they slap in one of these ready-made phrases and consider that they have successfully evaded a risky point.

But have they? When the point comes up in actual practice afterward, what has the plumber to go by? All he knows is that he must do the work "in a manner satisfactory to the health officer." How is he to know what will be satisfactory to the health officer? If he goes to the official and asks him what he will have to do, the latter is very liable to reply that he cannot tell what to do, but that he will know after the job is done whether it is satisfactory or not. Note the position that the

unfortunate plumber finds himself in. And yet incidents of this kind are occurring all the time, as the direct result of the looseness and ignorance shown in drafting municipal sanitary ordinances.

Then there is the other side of it. The property owner suffers very frequently from the same cause. In most places the administration of civic regulations is very lax and the plumber who accepts the vague terms of the by-law as an excuse for doing cheap work can very often get away with it. And it is not only the property owner who suffers. Such things inevitably react against the members of the trade as a whole.

A Guide Needed.

The difficulty lies here. The men who are delegated to draft up regulations have nothing to guide them by except the regulations in other places; in other words, the efforts of men situated similarly to themselves. What is needed is a national code, which would cover each phase of sanitary work satisfactorily and which could be adopted to meet local requirements. If the Dominion or Provincial health authorities would go to the trouble of appointing thoroughly competent men to study the situation and draft up regulations which would leave nothing to chance or guess work, it would not be difficult after that to effect a revision of all the local ordinances. Reforms could be brought about in that way and uniformity would be the ultimate result.

Saskatchewan adopted this step in May of the present year. A copy of the draft put out was published in a recent issue of *Plumber and Steamfitter*.

There is a gradually awakening interest being shown in all parts of the country in this important subject. The following despatch from Vancouver indicates that action is being taken in the Province of British Columbia.

Movement Started.

Vancouver, Oct. 27.—The British Columbia Government is being urged by the provincial authorities to establish a provincial board of plumbing, to hold periodical examinations for plumbers and to draw up regulations covering the installation of plumbing in buildings in all districts where no such laws exist at present. Discussing the matter, the city medical health officer stated that in the case of such districts as D.L. 301 and Hastings Townsite prior to annex-

ation with the city, there were practically no regulations respecting the installation of plumbing, the result being that when the city took charge the officials found themselves face to face with many problems occasioned by the use of inferior plumbing materials, carelessness in installation and such like. If a provincial board had charge of all such districts and also drew up a law governing unorganized districts and all municipalities not possessing regulations, general good would result. The by-laws would not necessarily have to be along such strict lines as those of the city, but might follow them in a general way.

Plumbing, generally, in Vancouver is in good condition. Building is still going on apace, and the tendency of the civic authorities to demand better workmanship and materials will result for the betterment of the trade. The smaller master plumbers have too much competition among themselves to allow a suitable margin of profit. Many figure directly from the invoice and all of the smaller ones figure very close. Unsatisfactory results have followed.

Public Buildings.

A new jail building is to be erected in Hamilton, Ont.

A university building is projected at Strathcona, Alta., to cost \$120,000.

A new Presbyterian church is to be built on Dundas street, London.

A new court house to cost \$300,000 has been recommended at St. John, N.B.

Plans are being prepared for the erection of a theatre at Saskatoon to cost \$60,000.

A new Seminary of St. Sulpice is being erected in Montreal at a cost of \$50,000.

A new theatre is to be erected by G. B. McMillan at Nanaimo, B.C., at a cost of \$15,000.

A by-law is to be submitted in Maisonneuve, Que., to authorize the raising of \$30,000 for a public bath.

A new municipal hall, to cost \$7,800, will be erected at Alveston, the necessary by-law having been carried.

A by-law will be submitted to the people of Hamilton, Ont., in January, to raise \$85,000 for a new hospital.

Two new schools are to be built in Brantford, Ont. The school board has purchased the sites. One of the buildings will cost \$35,000.



The Question Box



Subscribers are Urged to Send Questions to be Answered, or to Comment on Letters Published. Descriptions of Jobs Done or Shop Kinks are Also Invited.

AIR PRESSURE JOB DOES NOT WORK.

Editor Plumber and Steamfitter:—In the drawing enclosed the water does not seem to come as it should. When a faucet is opened the pressure all goes away. Please state the cure.

J. C. Devine.

Montreal, Oct. 25.

You have the supply to the job connected wrongly at point 2. This may be

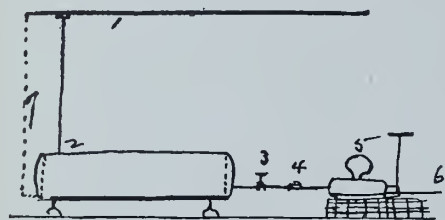


Figure 1.

taken from the end of the tank, as shown by the dotted line 7. The gate valve 3, and the check valve 4, the pump 5 and the pipe 6 to the source of the water supply seem to be all right.

Another manner in which the supply to the house might be run from point 2 would be to put in a drop tube nearly to the bottom of the tank, similar to the manner in which the cold water supply tube is put into the range boiler—D. C. H.

CAN A "BY-PASS" BE ELIMINATED.

Editor Plumber and Steamfitter:—I am sending you a drawing of a job I came across the other day and wish to know how it can be cured. As it is the air from the sewer has a direct entrance into the bath room through the overflow to the bath tub.

James R.

Brandon, Oct. 21.

Our correspondent's predicament is given in Figure 2, which appears to tell its own story of the "by-pass."

Such a trap as is shown is not the best practice in the world, but if it must be used, we suggest the manner shown in Figure 3, and also the vent which is shown by the letter "X." In this way the bath room will be doubly

protected against the odors from the sewer.—D. C. H.

WANTS A CIRCULATING IDEA.

Editor Plumber and Steamfitter:—Will you not be kind enough to give me some idea of the manner in which I should run the pipes (hot water) for a small plumbing job?

Thos. Buckley.

Vancouver, Oct. 13.

We show range boiler, water front, the general run of the hot water pipe in Fig. 4.

The supplies to the different fixtures can be taken off at various points such as are shown in the figures, "1, 2 and 3."

Care should be taken, however, that the run of pipe marked "4" is not located too far below the water front.—D. C. H.

INDIRECT RADIATION.

Editor Plumber and Steamfitter:—Having had occasion in the past month to tear out several indirect radiators that have been in use for a few years, and observing the accumulation of dirt and various substances. I would bring the matter to your attention.

D. C. Buell.

Halifax, Oct. 12.

Undoubtedly the correspondent is right in his conclusion as to the substances collected, or deposited, in the indirect, as they are generally put in. Some of this is due to the carelessness of the person who looks after the building. We have observed caretakers sweep the dirt from the floor directly into the indirect. People come into the room and stand on the register (where it is placed in the floor) and the dirt from their shoes drop down upon the radiator.

Again, unless some kind of a screen is placed in the flue to filter the air, in a large city all kinds of dust will be drawn in and passed over the indirect. Fasten a piece of canvas over the intake of the flue and after a few days examine the same. You will be surprised at the result.

Where indirect radiators are used extensively we believe that it would be

an excellent plan to use, in connection, some one of the many good air cleansing devices that are upon the market and warranted to do away with this very condition of things.—D. C. H.

SIZE OF AIR SUPPLY.

Editor Plumber and Steamfitter:—Will you kindly give me some idea of the size that the cold air flue and the hot air delivery pipe should be that de-

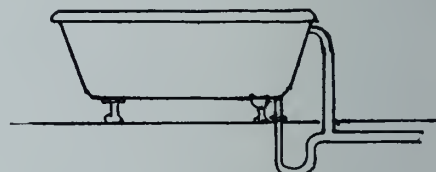


Figure 2.

liver and pass away the air to an indirect radiator?

S. C. Jennings.

Toronto, Oct. 26.

One authority on the subject states that "the area of the cold air inlet should be three-quarters of a square inch to one square foot of heating surface in the stack; but that when the duct is ten or fifteen feet in length this may be increased to one square inch, which latter is the proper proportion for the clear openings in the warm air register." On an indirect radiator, approximately fifty feet in size, two very prominent authorities seem to differ somewhat as to the size of the air flues. One states that the number of square inches in the cold air duct should be seventy-five inches, the number of square inches in the hot air duct should be one hundred square inches and the size of the register should be ten by fifteen; while the other authority gives the figures as ninety square inches for the cold air duct, one hundred square inches for the hot air duct and the size of the register as twelve by fifteen.—D. C. H.

SEWER ABOVE CELLAR BOTTOM LEVEL.

Editor Plumber and Steamfitter:—How can I get the sewage from a system where the sewer in the street is higher than the cellar bottom?

Winnipeg, Oct. 16.

M.Y.D.

In order to accomplish the desire of the correspondent some mechanical means will have to be used to raise the sewage. This might be done by the means of an ejector which was run by the use of compressed air, or an ejector of the piston pump kind.

This piston pump variety is recommended to give good results when the height to which the sewage is to be raised is great and the amount small. When the quantity is large and the height not very great a centrifugal pump ejector is thought to be the thing.

Before deciding the question we would recommend that you write to various manufacturers and get their opinion and estimates of your job, sending them a correct lay-out of it.—D. C. H.

VENTING INTO CHIMNEY.

Editor Plumber and Steamfitter:—Would it be considered the proper thing to connect the vent pipe for a plumbing job into the chimney of the building in which the plumbing job was installed? Calgary, Oct., '11. F.R.G.

We believe that some authorities al-

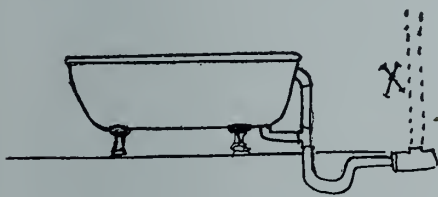


Figure 3.

low this sort of practice where some means is used to keep a current of air moving in the chimney, such as a steam loop or perhaps a gas jet, and where the vent pipe enters the chimney in the attic. While this might be considered advisable, in some cases, we believe that we should prefer to see the vent pipe run through the roof entirely independent of the chimney. The steam loop might not be heated in the summer time, and for some reason or other the gas jet might go out. This being the case, it's an even break but what some of the sewer air would eventually work into the dwelling.—D.C.H.

UNDESIRABLE NOISES.

Editor Plumber and Steamfitter:—Please tell me how to remedy some of the noises which frequently occur in plumbing jobs.

Dan Mack.

These noises occur for various reasons such as too great a water pressure, the remedy for which is to use a first class pressure reducer, letting the water into the house at a pressure of fifteen or twenty pounds. Another cause of noise is the use of too small pipes, for which the remedy is to use larger pipes. A frequent cause of a singing noise is when the water pipes have not been

reamed. This will reduce their carrying capacity and also certain slivers may stick down into the passing water. Ream all of the water pipes thoroughly.

Loose washers will produce a very annoying amount of noise. Replace the offenders with new packings. On many jobs where no air chambers are used there will be a hammering noise. Put on air chambers or perhaps it may be necessary to do both in order to entirely cure the job. Noise also comes from the water pipes being fastened directly to the beams in the basement.

This can be done away with if the pipes are insulated by placing a piece of rubber or leather between the pipe and the place where it and the hanger are fastened to the beam. Sometimes, when the pipes are loosely fastened and the water pressure is quite strong the pipes will vibrate, thus causing noise. The remedy is, of course, to properly anchor the pipes.—D.C.H.

Editor Plumber and Steamfitter:—A neighbor wants me to supply him with steam heat for his house from another house. He has 24 radiators. What rate can we adopt for charging for the same? J.M.

Toronto, Oct. 13.

The question is too general to give any definite answer to. The best I can do is to point out a few things. We do not know whether the steam is to be returned to the boiler or not, nor whether it is exhaust steam, or live steam or a part of each. I have known of instances where they charge a certain sum for each radiator. This would be

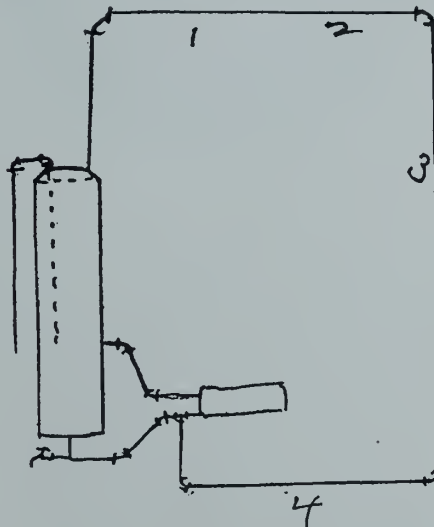


Figure 4.

crude, for radiators differ in size. Charging a certain sum per square foot would be nearer the mark. The objection to the square foot deal would probably be that all of the radiators might not be in use at the same time.

If this steam is to be taken from a power boiler a pressure reducing valve

should be used before allowing the steam to enter the 24 radiator job, and if the condensation is to be discharged into some sewer a cooling coil should be used, as the condensation should not be allowed to enter the sewer hotter than 120 degrees.

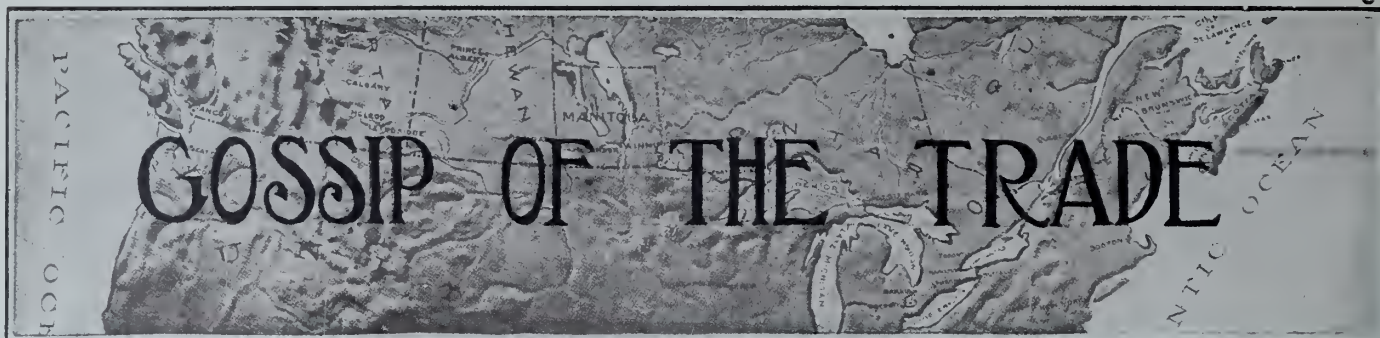
Probably the most accurate means, and fair alike to both parties, would be to use a special meter for measuring the amount of condensation from the radiators. As for getting the rate to ask on such an installation, I would suggest that the party write to the American District Heating Co., of Lockport, N. Y. He can get the names of several cities and towns and write to the managers and get their rates, and he will then have the right rates of which there can be no question. In this way he will not furnish the steam at a loss, neither will he overcharge. He will make a profit, but the customer will not be "skinned."—D.C.H.

Registration in the Old Country

The Ironmonger says: The fifth annual conference of the General Council for the National Registration of Plumbers was held at Liverpool, under the chairmanship of Mr. H. D. Searles Wood, of the Royal Institute of British Architects.

Sir Henry Hibbert, chairman of the Lancashire County Education Committee, addressing the delegates, emphasized the public value of ensuring that all plumbing work was executed by fully qualified workmen. He hoped the day was not far distant when there would be none but registered plumbers. In Lancashire, they had eleven centres and expended £800 in practical plumbing classes, which were rightly, he thought, restricted to trade students. Sir Henry expressed his opinion that this country was not behind in the technical education of the workmen, but it certainly was losing ground in the scientific and technical education of masters and their sons, managers, and foremen.

Captain T. B. Shaw, chairman of the Board of Education Advisory Committee on Examinations for Plumbers, speaking of the examinations of the City and Guilds of London Institute, and the examinations of the Worshipful Company of Plumbers, urged the advantages of co-operation between the two bodies and the establishment of a common standard, laying stress upon the greater importance of a proper course of training than a mere examination as a satisfactory test of competency.



Gets an Increase.

The plumbers and electrical workers of Hamilton, Ont., have secured an increase in wages of 5 cents an hour.

A Big Contract.

L. A. Greene & Co., Fort William, have secured the contract for the plumbing and heating work on all the stations on the G. T. P. between Graham and Winnipeg.

Fell Under Train.

A tinsmith named Mumford, employed with L. H. Carufel, Strathmore, fell under the steps of a moving train which he had attempted to board. It was stopped after two cars had passed over him, and it was found that he was uninjured.

Business Changes Hands.

The plumbing business in Sarnia, which has been conducted for the past few years by Miss M. Kerr, has been purchased by J. Filsinger of Essex Centre. The new proprietor has taken possession of the business. A full line of electrical and gas fittings will be carried.

Secures Several Contracts.

The City Plumbing Co., Wetaskiwin, Alta., have been awarded the plumbing and heating contract in the new post-office building there. Among the other contracts they have in hand are the heating of the fire hall and the residences of Mrs. Nelson, Mr. Martin and Mr. Douglas, all residents of Wetaskiwin.

A Hustling Firm.

John McKenzie, plumber, of A. E. Hayman's staff, Stellarton, N.S., was in Canso recently installing a heating system in a building of A. N. Whitman & Company. While in Canso, Mr. McKenzie figured on several other jobs and the prospect is that this firm will secure further business in that town. They are also figuring on contracts in several Cape Breton towns.

Remove Gas Fixtures.

Ald. R. H. Graham, at the Toronto City Council meeting, gave notice of a motion that, on account of the many fatalities which occur from time to time through gas poisoning, he would ask leave to bring in a by-law compelling all hotels and lodging houses to have the gas fixtures removed from all

sleeping apartments and pipes properly stopped, and that electric lighting be instituted instead of gas.

Dance and Euchre.

The Tinsmiths and Roofers of Montreal local union, No. 116, held their first dance and euchre of the season at National Hall, on Saturday evening.

News From Chatham.

The sanitary firm of Draper & Trum-pour has been dissolved. Filis Trum-pour is retiring from the partnership, and J. W. Draper will carry on the business.

Mitchell Bros., plumbers, have received the sub-contract for the heating system for the new public school here, the building operations on which were commenced a short time ago.

School Official Proposed.

It has been proposed that a sanitary engineer be appointed for the schools in Toronto. The new official will have to be an expert on all matters pertaining to plumbing, heating and ventilation. It would be his duty to supervise the installing of heating, ventilating plants and plumbing arrangements in new schools and advise as to the alteration of such matters in old schools. He could also advise the caretakers as to the operation of the heating and ventilating plants.

Ventilation is Bad.

R. K. Rourke, superintendent of buildings and grounds at Port Arthur, has reported condemning the heating and ventilating in the collegiate building there. Part of his report reads:—

"The most serious part of the heating in connection with the ventilation is in the steam coils. After getting the pump replaced, to make a proper test of these coils, I had the janitor raise about ten pounds of steam and turn it gradually into these coils, eight in number, and I find that every section is leaking badly as though they had been frozen, bursting the cast iron bases in connection with the 6,000 lineal feet of steam coils in eight sections. I may say that if the pump and receiver had good working order this might not have occurred, and as for the heating and ventilating system in this build-

ing, it is really useless until the work is repaired. I cannot say who is responsible for these repairs but I would like very much to have this work done before the cold weather sets in."

An Incinerator Plant.

Work has now commenced at Moose Jaw on the new city incinerator and it is hoped to go right through with the work. It was originally intended to erect it near the power house, but owing to the close proximity to the city it was deemed advisable to take it to the sewage disposal plant where the city have ample space. The manufacturers of the plant are Henan & Froud, of England, with Messrs. Laurie & Lamb, of Montreal, as Canadian agents.

A Sad, Sad Tale!

It must be admitted that the laugh is on a certain Master Plumbers' Local Association.

The members of this association have that fine quality of humor, which enables them to see the joke, even when it is at their own expense, so there can be no harm in recounting the circumstances. On to the tale, therefore.

Some years ago, it seems there was a number of members of the Association who were behind in their dues. The officers tried to get these delinquent members to pay up. They failed. Next they tried to get the men to resign. They would not do this either. So, at a meeting, it was decided to put the matter in the hands of a lawyer. The names of those who had not paid were given to him, and he was instructed to get after the money.

Get after it he apparently did, and thereby hangs this sad, sad tale.

The lawyer took action against one of the delinquent members. He succeeded in getting judgment against the man, a very gratifying result. But difficulties arose. It developed the man was in such poor financial condition that he was not only unable to pay the amount for which he had been adjudged responsible, but he was also unable to pay the expenses of the prosecuting lawyer.

What was the legal light to do? A workman, it has been said on the best authority, is worthy of his hire. A lawyer is not only worthy of his hire, but makes sure that he gets it. This

particular lawyer could not get his money from the man against whom he had secured judgment, so naturally he sent in his bill to those who had employed him, to wit—notice the legal phrase—the local association.

It has taken three or four years for that bill to arrive, but it is in the hands of the association's secretary now and seems to demand payment.

The amount is not large. It certainly will not place the association in financial difficulty. But there were some thirty names in all given to that lawyer. The members are wondering if bills for any more of these are likely to come in.

Careless Journeyman.

A careless plumber and a man who went to find a gas leak with a match were responsible for an explosion at 94 Clark street, Montreal, last week. Of course the man who had the inquiring mind was the direct cause of the sudden blaze up, which injured not only himself but two perfectly innocent people; yet a plumber who had been doing repairing work in the bathroom had left a gas pipe open, permitting the trouble-making escape.

Wrecked the Line.

For the past two weeks the British Columbia provincial police authorities have been endeavoring to ascertain the identity of the person, or persons who, on September 25th, attempted to put out of commission the new main pipe line of the Esquimalt Water Works Co. from Goldstream to the city. Some miscreant place a charge of dynamite or other explosive under the pipe line at a spot near Langford Lake, and wrecked one of the lines of pipe, allowing the water to overflow the adjoining territory.

Montreal Plumber Assigns.

Montreal, Oct. 28.—Upon the demand of Joseph O. Dion, Eugene Perreau, plumbing contractor, has assigned. The liabilities total \$6,000, and are divided among thirty-four creditors, of whom the principal are: Gurney-Massey Co., \$310; J. O. Dion, \$900; Jean Paquette, \$988; Warden King Co., \$727.

The assets consist of stock in trade, debts in the books, and interest in certain Outremont and Laurier Ward properties. J. O. Dion has been appointed provisional guardian.

News Briefs.

C. W. Worrell, a tinsmith, has started in business at Glen Ewen, Sask.

Raoul Leboeuf and J. Leo Leboeuf have registered as plumbers and roofers in Montreal, under the style of R. Leboeuf & Company.

Classes in steam fitting have been instituted in connection with the work in the Technical School at Stellarton, N.S.

W. C. Bennett, plumber and tinsmith, Kingston, has moved his place of business from 373 King Street to 191 Princess Street.

The Acme Plumbing and Heating Co., Prince Rupert, have sold to Smith and Mallet.

D. B. Brown, Meaford, plumber and hardware dealer, has advertised his intention of closing out his business.

A Solid Firm in a Solid City

HEREWITH are shown Harry and Dick Mahoney, who comprise the well-known firm of Mahoney Bros., of Guelph, Ontario. Harry is particularly well known as he has been a prominent figure in association work, for many years. He has held offices in the National and in the old Ontario Provincial Association, and is still taking an active part in everything that tends toward the advancement of the trade.



Harry Mahoney.

The Mahoney brothers got a good start in life—the very best kind. Mr. Mahoney senior believed that his sons should get part of their training at least, in the school of experience, which if a trifle rough is also thorough. Accordingly he gave each boy, when he came out of school, a sum of money and told him to go away from his home town and fit himself for the occupation that he preferred. Harry decided to become a plumber and, when the time came for him to leave school, he struck off for Chicago and apprenticed himself to B. Baggot, one of the biggest men in the trade in the Windy City. Here he not only learned the trade in a most thorough manner, but many other valuable traits were instilled into him as well. The salaries (?) paid apprentices

in those days were just about as low as living expenses were high, and it took a natural born financier to get along at all. But, thanks to the fact that he had been brought up in the City of Guelph, where the people just naturally make one dollar do the work of two, Harry



Richard Mahoney.

managed to get along famously. It was then that he first learned the wisdom of keeping down overhead expenses. After his time was up, he worked in a number of American cities to round himself off, and then returned to little old Guelph, where he started in business with his brother.

Both Harry and Dick Mahoney are firm believers in the necessity for trade organization. They stand strongly in favor of anything which will tend to improve conditions within the trade and can be relied on for active support.

They have built up a good business through the adoption of solid business principles and thorough attention to practical details.



Two Juvenile Sanitary Engineers—Harry and Dick Mahoney.

A departmental store for the Hudson Bay Co. is to be built at Calgary. The cost will be \$1,500,000.

News of the Manufacturers and Wholesalers

THE MUELLER PLANT.

Arrangements have been practically completed for the establishment of the Canadian branch of the H. Mueller Manufacturing Company at Port Arthur. An agreement has been drafted up between representatives of the company and Industrial Commissioner Neill. The agreement proposes to grant the company a block of land on the south side of Current River adjoining the site of the wagon works and extending to the washout. Free taxation is also included and the city is to erect a building costing \$40,000. The whole value thus contributed by the city is estimated at \$60,000. Title to the property is to remain in possession of the corporation until the company has paid in wages at least \$600,000 when title is to pass to it.

There are provisions in regard to employees and the usual other provisions that go with similar agreements.

ANOTHER CONCERN ENLARGES.

In view of the increased demand for pipe threading machines and gray iron castings, the John H. Hall & Sons, manufacturers, have acquired an interest in the Brantford Foundry Co., better known as the Burrill Foundry Co., which in future will be known as the John H. Hall & Sons' Foundry Co., located on Gray street, which for a short time has been run by Mr. George E. Forsythe and Mr. Norman J. Prowse, both of whom retain an interest in the present concern. Mr. Forsythe and Mr. Prowse are both thoroughly competent men to carry on this industry, having had several years' experience in some of the best shops as practical and theoretical men. The new concern is well equipped throughout and can handle not only large quantities of work, but the most intricate and difficult castings in gray iron, brass and aluminum.

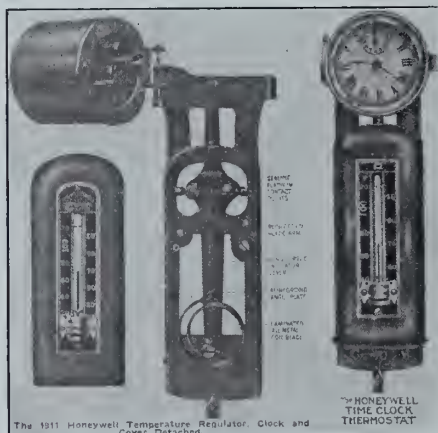
The present factory of John H. Hall & Sons on Bridge street, is also undergoing many changes and extensions, they having already let the contract for an enlargement to the present factory which will nearly double their capacity. All the adjacent land obtainable has been purchased, and building operations are now under way. The new addition will be used for erecting purposes only; a travelling crane and full equipment of latest design will be installed, giving every convenience for the handling of heavy work. Each branch of the work is under the

personal direction of one of the firm, the firm consisting of Mr. Hall, sr., and four sons.

Arrangements have also been made with an American concern to build and operate electric welding machines, the exclusive agency for the same having been secured for Canada. In this connection an electric job welding business will be conducted in the new building.

A NEW REGULATOR.

The Honeywell Heating Specialty Co. are introducing a new type of temperature-regulator known as the 1910. The thermostat has been improved over all older models but the motor remains the same. The changes in the thermostat apply, not only to the construction, but as well to the character of the materials used. An all-metal coil-blade has been introduced, which is made from material imported direct from Germany. The



contact points are of platinum. The adjusting mechanism has been reduced to the simplest possible form, with few moving parts, and therefore less liability of getting out of adjustment.

By a very simple hinge-arrangement, the clock is made detachable, yet it is so arranged that the clock will not drop from its hinge when open.

TO MAKE BOILERS.

Thornton Bros., who have purchased the hardware business of A. T. Howes & Co., at Bradford, Ont., have secured the Canadian right to manufacture a steam boiler, which, it is claimed, can effect a large saving in fuel. They have already taken out several furnaces and replaced them with their new boilers.

W. H. Thornton, one of the members of the firm, was formerly a hardware merchant at Inwood, Ont.

TOUR OF INSPECTION.

Directors of the Dominion Steel Corporation left Montreal for Sydney on Wednesday. There they will inspect the steel plant and mines. Those in the party were: President Plummer, Sir Montague Allan, G. Caverhill, Wm. McMaster, Frederick Nicholls, W. G. Ross, J. R. Wilson and Mark Workman.

TO EXTEND FOUNDRY.

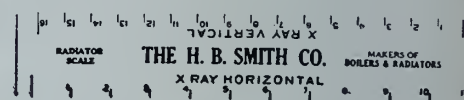
T. McAvity & Sons, St. John, N. B., have asked the city for a strip of property necessary to allow them to carry out their plans for an extension to their foundry.

A NEW FACTORY.

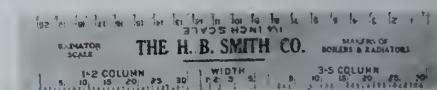
Tenders are being called for the erection of a factory to cost \$15,000 on Wellington Ave., Windsor, Ont., for the Canadian Winkley Co., manufacturers of brass goods. It will be a one-storey building 100 by 100 ft. of steel frame and brick construction.

RADIATOR SCALE RULE.

A new radiator scale rule has been distributed by the H. B. Smith Co., 39 E. Houston street, New York City. It is designed to assist heating contractors in measuring up the various



sizes of radiation when estimating from plans. The illustration shows both sides of the rule, which is an inch in width and a trifle over five inches in length. On one side there is a quarter-inch scale,



showing the various sizes in $\frac{1}{2}$ and 3-5 column radiation, together with the width of each, and on the opposite side a scale for X-ray vertical and X-ray horizontal radiation.

WHAT'S THE RECORD?

The demand for heating goods just at the present moment is at its height. Boilers and radiators are selling just as fast as the manufacturers can turn them out—and sometimes faster. Salesmen for the heating firms are vying with each other in their efforts to hang up

new records. On Thursday of last week a Toronto salesman brought in orders for seven boilers, which he had picked up around the city, and he was feeling a little cocky about it. His self-satisfaction vanished, however, when he discovered that another member of the staff had sold no fewer than ten.

These records are pretty good but they can't be compared with some of the achievements of past days. Not so many years ago, a "live wire" salesman, traveling out of Montreal, struck Ottawa in quest of boiler orders. It so happened that the rumor had gone forth among the trade in the capital that boilers were going up and the salesman consequently found everyone he tackled peculiarly agreeable to consideration of his proposition. Every steamfitter in town was anxious to order his goods before the advance went into effect. The salesman put in a busy day and called on enough men to satisfy even the most exacting of sales managers. He found that evening, on totalling up his sales, that he had landed orders for no less than seventy-two boilers.

But even this record was due to be eclipsed. Taking advantage of the same rumor, another salesman took seventy-four orders in the City of Montreal in one day.

It may be that some wily and silver-tongued salesman has done as good or better than this. If such happens to be the case, we would like to hear from him.

HAD LEG BROKEN.

Toronto, Oct. 27.—Ernie Laidlaw, city traveler with Warden King, met with a serious accident last night. He was out practicing with the Argonaut rugby squad, and on the first "down" collided with one of the husky men on the other line. His right leg was broken in two places as a result of the accident.

Ernie will be greatly missed by the Argo Intermediates, as he was one of their star players, but he will be missed even more so by his firm. This is "boiler time" and his absence from the sales staff will be hard to fill.

PERSONAL NOTES.

T. S. Waldon, of Waldon Co., Winnipeg, is in Toronto on a business trip.

Harry A. Derry, western representative of the Gurney Foundry Co., has recovered from a five weeks' attack of typhoid fever. He has now left his home in Renfrew, and has gone as far west as Fort William.

The wedding took place last Tuesday, in St. Stephen's Church, St. John, N. B., of Miss Ena Frances McLaren, to Ronald Armstrong McAvity. The ceremony was performed by Rev. Gordon Dickie. The groom was supported by

Douglas Adams, of Toronto, and the ushers were: Clifford McAvity, Jack Belyea, Malcolm McAvity and Walter Emerson. Among the wedding gifts were:—A cut glass water pitcher and a half dozen cut glass tumblers, from the staff and employees of the Vulcan Iron Works; an electric reading lamp, from the Water Street McAvity offices and front store, and a large cut-glass bowl from the King street employees.

THE WESTERN PLUMBERS' PROBLEM.

Montreal, Oct. 28.—W. M. Roden, sales manager of Warden King, returned to-day from a trip through Alberta and Saskatchewan. Like the others who take such excursions, Mr. Roden has the western fever. He says the advancement made in the new provinces, even in a year, has been remarkable.

Asked about plumbing in the west, Mr. Roden summed up the situation briefly.

PLUMBING AND HEATING MARKETS

MONTREAL.

Montreal, October 31.—Manufacturer and wholesaler are still, face to face with one great difficulty—to supply the demand. In some parts of the country work is near completion, but from others the cry for more enamelware, more piping, more boilers, still comes.

"You can imagine how busy a season it has been," remarked one sales manager, "when I tell you that in two or three weeks we have been forced to turn down orders for soil pipe amounting to 35,000 lengths. We would not have done that if we could have helped it."

Another man states that conditions are a little easier than they were a few weeks ago. "But we are rushed yet," he added. "We can not keep up with the orders. Just to-day I received fifteen telegrams asking when the goods wanted are coming."

The greatly increased demand noted this year is not entirely given as the cause for the existing shortage. Manufacturers expected this increase, and were preparing for it, but the intensely hot weather of the summer decreased their output. "We were closed down entirely for eight days," stated one manager. "It is not easy to catch up with the loss in production such a stop means. Yes I feel sure we won't be so short next year. We'll be better stocked when the heavy ordering starts."

Enamelware.—From the west as well as the east orders are still coming for this class of goods. It is possible to install these if a roof is once on a building, so the business in this line will not be

"The western dealer is face to face with two problems," he remarked. "How to get the goods needed, and how to get the men to install these."

WORK BEGUN.

A despatch from Winnipeg states that operations have been begun by the Anthes Foundry Co. for building a \$150,000 plant there.

ERROR IN ADVERTISEMENT.

In the last issue a typographical error occurred in the advertisement of the National Plumbing Supply Co., on page 21. In describing the "Leighton" enameled pedestal lavatory, it was marked at \$110 when it should have been No. 110.

PATENTS ISSUED.

Among recent Canadian patents issued is one to A. C. Clayton, for a water heater and one to J. F. Logue for heating devices.

over for two months yet. The manufacturers and wholesalers are behind. They can not give prompt delivery of orders now being received, for so many dealers had the foresight to make their wants known earlier. These naturally get first consideration.

Boilers and Radiators.—At one house it is reported that the orders for radiators are still being promptly filled, though the extra supply made during the winter and early summer is now about exhausted. At another manufactory word comes that the extra stock prepared has been exhausted, and that the delivery now taking place is from factory to dealer. The same heavy demand is reported for boilers. The new structures being completed must be equipped with these, so hundreds are being ordered. Delivery is fairly prompt.

Soil Pipe.—"There isn't any." That's the way one manager summed up the situation. Of course he was not speaking literally, but his remark conveyed the impression that soil pipe is about as hard to get as eggs with double yokes. The demand is so far in excess of the supply that those ordering are lucky to get all for which they ask. Delivery is often being delayed, and often half quantities are being sent out.

There has been no change in price, discounts being as last week.

Lead Pipe.—Here the expected change in price has taken place, discounts now being quoted at 45 per cent. instead of 50 per cent. The rise is natural. Lead of all kinds is scarce. The price of pig lead has risen 35 cents a hundredweight,

and it follows that lead pipe must sell for a higher figure. Despite the rise the demand has not fallen off to any marked extent. Some read the signs of the times and tried to lay in a supply before the increase came. But only a few were able to get all the piping they wanted. Handlers were not anxious to sell in large quantities. It is stated by some that a still further rise is not unlikely.

Iron Pipe and Fittings.—An anomalous condition exists here. The demand is heavy. The mills are selling all they can produce—are indeed being pressed for more goods—yet the prices have dropped. It is said this is due to United States competition. The new figures for the pipe, as announced this week are :

Black, $\frac{1}{4}$ and $\frac{3}{8}$ -inch, \$2.03 per 100 feet; $\frac{1}{2}$ -inch, \$2.63; $\frac{3}{4}$ -inch, \$3.04; 1-inch, \$4.37; $1\frac{1}{4}$ -inch, \$5.96; $1\frac{1}{2}$ -inch, \$7.15; 2-inch, \$9.18; $2\frac{1}{2}$ -inch, \$14.66; 3-inch, \$19.25; $3\frac{1}{2}$ -inch, \$26.12; 4-inch, \$29.70.

Galvanized, $\frac{1}{4}$ and $\frac{3}{8}$ -inch, \$2.86 per hundred feet; $\frac{1}{2}$ -inch, \$3.48; $\frac{3}{4}$ -inch, \$4.19; 1-inch, \$6.02; $1\frac{1}{4}$ -inch, \$8.21; $1\frac{1}{2}$ -inch, \$9.85; 2-inch, \$12.78; $2\frac{1}{2}$ -inch, \$20.41; 3-inch, \$26.80; $3\frac{1}{2}$ -inch, \$35.62; 4-inch, \$40.50.

Solder.—The usual good demand is noted here. The market is about the same as usual. Prices remain firm.

Tin.—The supply here is inadequate. It is hinted that it may become still smaller in proportion to the demand, before February—in which month the Metal Exchange will see enacted a new regulation aiming to steady the tin market—a regulation which will allow handlers to fill orders in other brands than Straits, upon making the proper concessions. It was hoped this change in the rules would prevent the Tin Syndicate conducting bull campaigns. It will make things more difficult for them, since they will have to gain control of English tin as well as Straits. Still the scarcity of the tin is regarded with some misgivings by the handlers. They fear this may bring about a rise in price.

TORONTO.

Toronto, Oct. 28.—It is doubtful if the plumbing trade in the Province of Ontario has ever experienced a busier time. Trade conditions are exceptionally good and everyone is busy. The manufacturers and supply men are finding it an extremely difficult matter to meet the demand. This is particularly the case in some lines. Radiators are scarce and the manufacturers are said to be loaded up with orders. Galvanized pipe in some sizes is hard to obtain. Enamelware is being shipped out

just as soon as it arrives and the same can be said for boilers.

Collections are reported to be satisfactory, although there are a few "backsliders" who are behindhand with their payments.

Enamelware.—The supply houses can sell, and are selling, every bit of enamelware that they can get. Although it cannot be said that there is a shortage, a number of the supply houses report that they have been at various times recently out of some one or other line. Even in the standard styles and sizes temporary shortages have resulted. "We are doing by long odds a better business than at this time last year," said one man, in discussing the situation. "In fact, trade has never been better."

Boilers and Radiators.—It is very doubtful if the boiler manufacturers have ever experienced a busier season than the present one gives every promise of becoming. Trade is so brisk that the supply is generally bought up in advance. One house reported to-day that they had at least one hundred orders for boilers ahead and that each day added to the total considerably. No fear of a shortage is expressed, however, as the manufacturers are proving themselves equal to the emergency and are rushing supplies forward.

It is more difficult to obtain radiators. Some of the manufacturers are said to be two and three weeks behind in their orders and deliveries, as a result, are slow. The supply houses find an insistent demand from the trade.

Soil Pipe.—The demand continues heavy. No complaints have been heard on the score of shipments, so it is presumed that the supply has caught up with the demand. Quotations on medium and heavy soil pipe are: 70 and 10. On the 7 and 8-inch sizes, the discount stands at 50 per cent.

Lead Pipe.—The predicted advances have come about. The continued advances in pig lead have rendered this step obligatory. Lead pipe sells at 7c a lb., and lead waste at 9c, with 25 per cent. off. Caulking is quoted at $4\frac{1}{2}$ cents. The discount on traps and bends has been reduced from 50 per cent. to 45 per cent. As the chances of a turn in the price of pig lead are deemed remote, the situation with respect to lead pipe will probably remain the same.

Iron Pipe and Fittings.—Lower quotations are given in some lines of galvanized pipe. This is somewhat of a surprise, as there has been for some months past a scarcity of $\frac{1}{2}$ -inch galvanized. The general expectation was that, if any price change were put into effect, it would be a case of "revision upward." However, some supply houses

are to-day quoting 1-inch galvanized pipe at \$6.02, instead of the old price of \$6.18, and black pipe 1-inch size has been reduced from \$4.54 to \$4.37. Other quotations remain the same as follows: Cast iron fittings, 65 to 70 per cent.; malleable fittings, $37\frac{1}{2}$ to 40 per cent.; cast iron bushings, 70; malleable, $67\frac{1}{2}$; nipples, 75 and 10; headers, 60 and 10, although some quote $67\frac{1}{2}$ and 70; flanged unions, 70; malleable-lipped unions, $67\frac{1}{2}$ per cent..

Solder.—Local quotations remain high. As tin has been steadily going up of late weeks with every prospect of keeping on the upward path, solder quotations are firm. Wiping, in the common grades sells at $21\frac{1}{2}$ c, the better grades as high as $25\frac{1}{2}$ c. Half-and-half is quoted at $27\frac{1}{2}$ c.

Metals.—The outstanding feature in connection with the metal market is the advance in lead. There is still a scarcity here but luckily the demand is not as heavy as it has been. For this the reason can be found in the fact that prices have been unusually firm.

The metal markets are all busy. Trading is brisk and the fact that the time for the closing of navigation is not far off has helped to create the condition of general activity.

On the whole, the business done this year, up to date, has been satisfactory. There have been periods when a state of semi-depression has prevailed but this has been due to external rather than internal influences. Metal men seem convinced that trade will continue good right through to the end of the year.

General Buildings.

A \$40,000 public school is to be erected at Windsor, Ont.

The Aylmer Canning Co. are planning a large addition to their present factory.

The Heinz Pickling Co. are planning to double their present factory at Rodney, Ont.

The Battle Creek Corn Flakes Co. will double the size of their present plant at London, Ont.

A new factory is to be built by the Petrolia Auto Co. A temporary building will be put up this winter.

The D. S. Perrin Co., London, are planning to erect a six-story factory in the spring to cost \$100,000.

Work is starting on the erection of a business block in Calgary to cost \$120,000. The owner is A. McDougall.

A new site has been secured for the Ontario Veterinary College at the corner of University avenue and Anderson street, Toronto. Large buildings will be erected.

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National Lowdown Closets
Imperial Lowdown Closets
Enamel Lavatories
Enamel Sinks
Galvanized Boilers
Enamel Baths
Plumbers' Brass Work

Gas Fittings
Malleable Fittings
Cast Iron Fittings
Soil Pipe
Soil Pipe Fittings
Black and Galvanized Pipe
Tools, Etc.

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Hot Water Quick Opening Radiator Valve.

"Miller" Hot Water and Steam Radiator Valves

The bodies and bonnets of our **Hot Water Quick Opening Radiator Valves** are made in one piece, thus having a great advantage over other valves, as it leaves one less joint or possible leakage. The cone-shaped Disc prevents sticking.

Our superior **Steam Radiator Valves** have very low seats and a high lift of Disc.

We manufacture both valves from $\frac{1}{2}$ " to 2", with or without union, also union elbows.

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KERR

Steam and Hot Water RADIATOR VALVES

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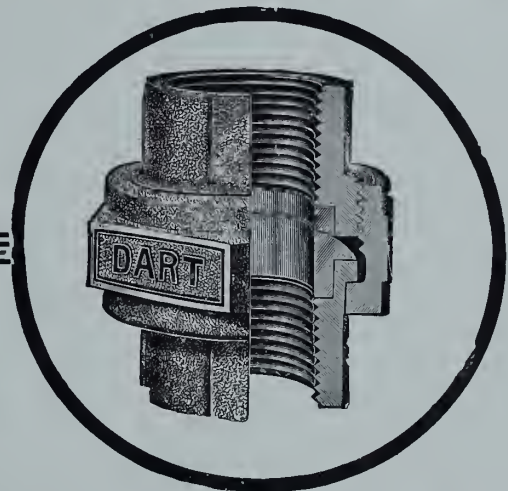
They set the standard for high quality in material and finish and stand the many tests of use.

Note the seats in Kerr's New Pattern J.D. Radiator Valves which insure perfect drainage.

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THE "Kalamazoo" Loose Leaf Binder is the only binder that will hold just as many sheets as you actually require and no more. The back is flexible, writing surface flat, alignment perfect. It cannot get out of order. No exposed metal parts or complicated mechanism. Write for booklet. Warwick Bros. & Rutter, Ltd., King and Spadina, Toronto.

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PRACTICAL HINTS ON JOINT WIPING, for beginners in plumbing. This book contains two original articles on joint wiping by experts, together with a selection of letters and articles on various important phases of the subject. 66 pages, 41 illustrations. Price 25c.

MACLEAN PUBLISHING CO., Technical Book Dept., 143-149 University Avenue, Toronto.

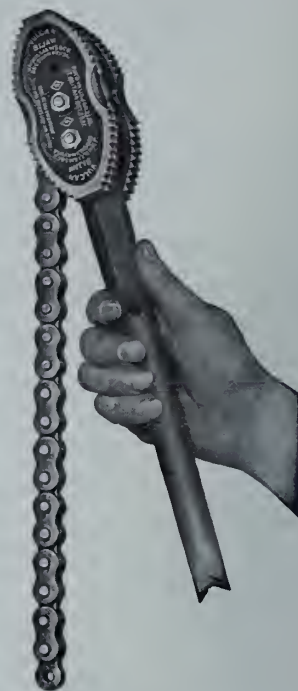
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Plumber and Steamfitter receives, from time to time, enquiries for the names of manufacturers of various lines. These enquiries come from firms who usually intimate they have looked through Plumber and Steamfitter but cannot find any firm advertising the line in question. In many cases these firms are anxious to secure the information at once. This page enables manufacturers to keep constantly before the trade lines which it would not pay to advertise in larger space.

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Corundum and Emery Wheels
Grinding Machines, Beaver
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For this purpose there can be
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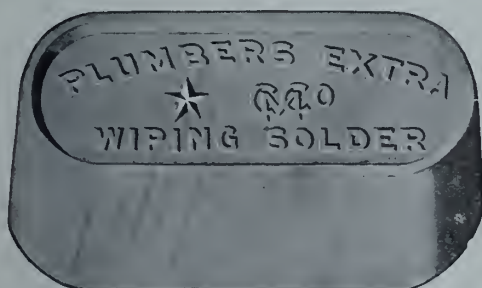
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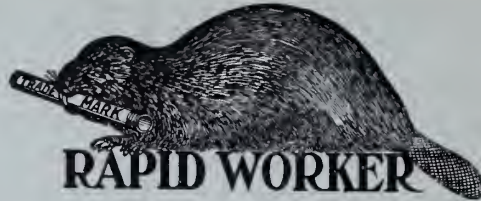
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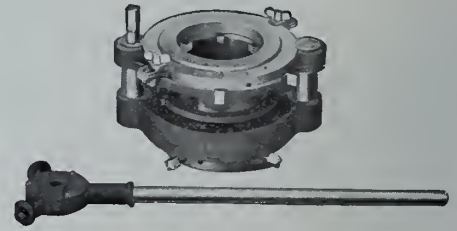
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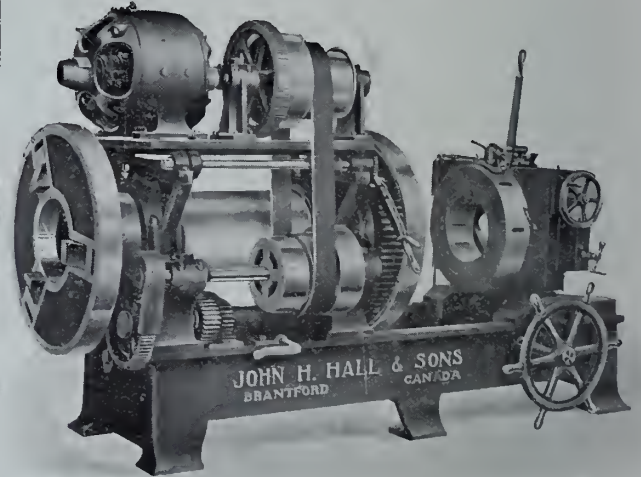
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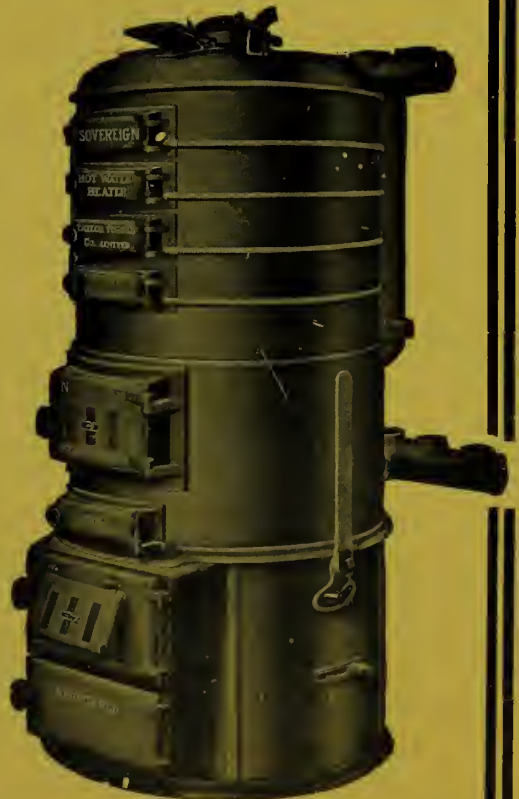
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Vol. V

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No 22



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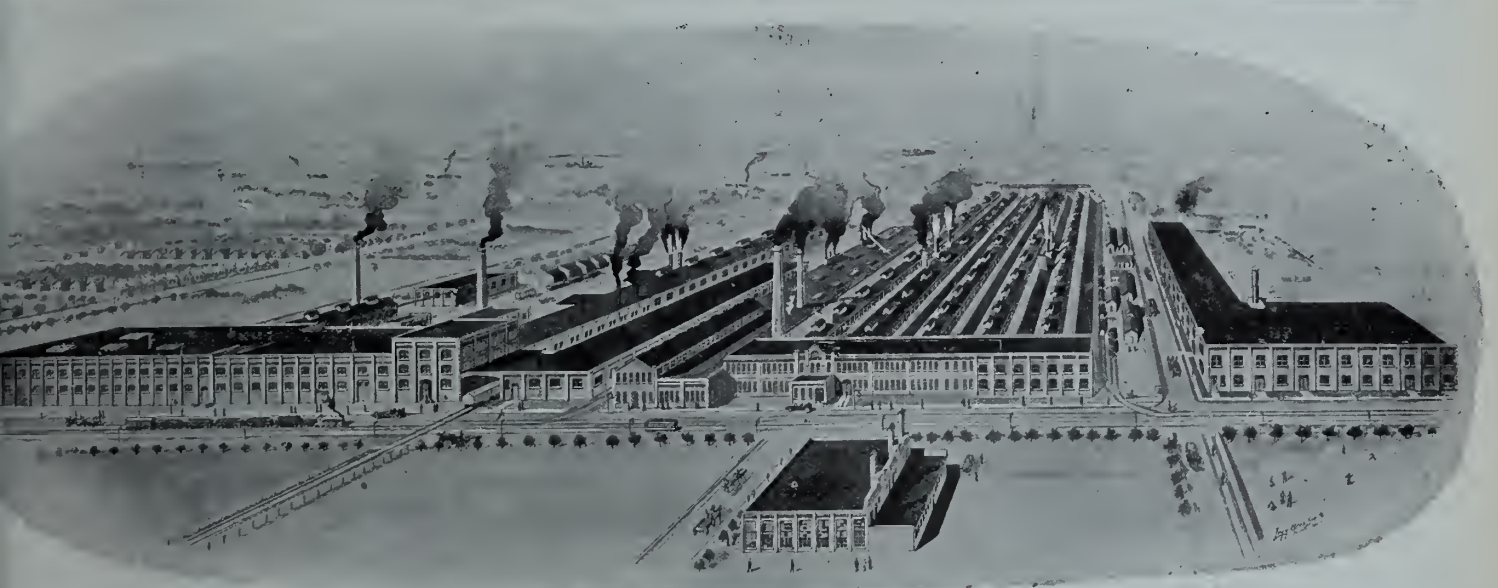
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TORONTO, NOVEMBER 15, 1911

IN ANOTHER column will be found an article, reprinted from the Canadian Engineer, in which objection is made to the granting of the charter to the Society of Domestic, Sanitary and Heating Engineers of Ontario.

Objections of The Engineers.

The writer of the article has attempted to deal in a facetious vein with the claims of the plumbing craft to a new name, and it would, therefore, not be wise to take the article too seriously. We desire, however, to set the matter in its right light, and point out the unfairness of the attitude adopted by the civil engineers.

At the outset permit us to say that the Canadian Engineer should have taken the precaution of obtaining authentic information before launching forth in such bombastic style. The article literally bristles with mistakes and inconsistencies. "The Plumbers' and Steamfitters' Union is again asking for a charter," reads the article. Apparently the Canadian Engineer is laboring under the misapprehension that the journeymen plumbers were the applicants for the charter. For the information of our contemporary on this point, we will state that the application came from the master plumbers of Ontario and that no union exists, or has existed, in their ranks. Note the use of the word "again," implying that the application had been made on previous occasions, presumably without success. Such is not the case. The article then goes on to state that "they have been working along this line for over a year." The decision to apply for a charter was reached on Good Friday of the present year, and it was only a few weeks ago that the actual work was started. Finally, the original application was not for the "euphonious title" of "The Canadian Society of Sanitary Engineers," but the "Society of Sanitary and Heating Engineers of Ontario." With these few exceptions, the article is correct in its statement of the facts of the case.

The Canadian Engineer finds it "hard to believe that an intelligent body of men, such as the plumbers' union, would make such an absurd request," and "hopes that the Provincial Government will not allow this incongruity to pass." Wherein lies the absurdity, and in what does the incongruity consist? The plumbing and heating trade has advanced to an incalculable extent beyond the stage when, as workers in lead, they earned the name of "plumber." To-day, the plumber does work which calls for a wide range of knowledge of scientific principles, as well as mechanical skill. He must understand the problems of heating and ventilation as well as have a thorough grasp of sanitation in its relation to health. In other words, he has outgrown the name

"plumber," and is entitled to one which more adequately expresses the nature of his work. The name as amended, "Domestic, Sanitary and Heating Engineer," fits the case perfectly.

The Canadian Engineer does not seem to appreciate the real importance of the part that the so-called plumber plays in modern life. The luxury and comfort of the modern home is due largely to the improvements effected in heating and sanitary appliances, and the trade has borne its part in bringing these improvements to pass. One does not need to refer to the benefits which have accrued from the standpoint of public health. It is not an "absurd request" for the plumber to come forward with a demand for proper recognition.

That the Provincial Government saw fit to grant the charter is the strongest vindication possible of the justice of the claim.

IS IT NOT time that some of the other provinces were starting the work of organizing provincial associations?

MONTREAL SANITARY AND HEATING ENGINEERS have become incensed at competition which is coming in from the United States. They claim the American firms are figuring so low, and with so little knowledge of local conditions, that they are doing the work at a loss. This being so, it may be wondered why the Montreal plumbers object at all. Will not the American competition kill itself?

Undoubtedly it would, if the contentions of the Montrealers are correct. But there are over 80,000,000 people in the United States, and a goodly number of them are aggressive sanitary and heating engineers. They look to Canada as a fair field for new business, figure low to get in, and find only by sad experience that they did not figure on a correct basis. A man does not willingly tell of his business misadventures, so other sanitary and heating engineers remain ignorant, and unwittingly come along and make the same mistake.

At this rate, it would take some time for United States plumbers to learn that they must figure on a higher basis. In the meantime they can rob the Canadians of a great part of their just work.

No wonder, then, the Montrealers are aroused. They talk of securing laws which will make the American invasion impossible, putting the United States sanitary and heating engineers on such a footing in Canada as the Canadians are on in the United States.

The move seems a wise one. Anyway, let the question be carefully investigated.

SUPPLY HOUSES are behind, and cannot fill promptly the orders which are still coming in from all parts of the Dominion. This is naturally causing the manufacturers some disquietude, and it is leading them to consider what this condition indicates for the

Next Year Will be year to come. Will the demand
Busier Than This. continue at the present increased scale, or will there be a falling-off?

The manufacturers and their responsible men have studied this question carefully, and the result of their deliberation is this: There will be no falling-off in the demand next year. Rather, there will be an increase, and the plants must be kept going at high pressure in order to get enough of the finished product on hand to prevent the possibility of a shortage.

"I have just been through the west," said the manager of one concern, "and I feel sure that there will be more building out there next year than there was this. That means a greater demand for goods such as we produce. I have studied the situation in Montreal, and from the buildings now being planned it would seem the operations in 1912 will be double those carried on in 1911. Everything points to an increased call for heating and plumbing goods. I am going to see that our plant goes full time all winter long."

A great amount of capital is needed to carry on extensive operations throughout the winter. A plant, for instance, which uses 100 tons of ore daily in order to produce soil pipe, is using daily \$5,000, outside of wages, interest on the plant, and a depreciation allowance. Yet this outlay will bring great returns next summer.

The manufacturers have confidence in Canada. They feel the country is going ahead, and they are going ahead to keep pace.

THE RISE in the price of lavatories, sinks, etc., will not affect the man whose order was filed prior to the advance. The man who is on time usually gets the best, even of a somewhat unpleasant situation.

IN THIS ISSUE appears a contribution from "J. W. B.," dealing with the need of better civic sanitary regulations, and also the need of uniformity in codes. The subject has received considerable attention in these

Urgent Need for still more in future issues. It
is Voiced. is, perhaps, the most vital problem

that the sanitary trade faces at the present time. Progress is being made toward the desired end, but very slowly. Advanced measures have been adopted in some sections. The movement, as at present felt, is all toward the improvement of civic and provincial ordinances. It has not yet embraced in its scope the establishment of uniformity among all regulations and codes. That will come later.

Although there are evidences of awakened interest, the trade has not become thoroughly aroused. There is, in fact, an apathy shown which is surprising in view of the evils which have arisen as a result of the inadequacy of regulations in so many sections.

REPORTS FROM all parts of the country indicate that the trade is exceptionally busy at the present time. May the benefits accruing to members of the trade be in direct ratio to the activity.

THE PRODUCTION of soil pipe, radiators and similar lines was greatly reduced by the terrible heat of last summer. To offset the lost time one western concern obtained permission from the Government to bring in workmen from the other side. Since local

Wise Interpretation labor could not be secured, and as
of Country's Laws. the future scarcity has shown that the extra production these men rendered possible was needed, there can be little exception

taken to the Government's action. The laws are for the people, after all, and it is certainly in the people's interests to have a production of heating supplies somewhat commensurate with the demand.

TO CULL a phrase from the sporting columns, this is "one best bet" for members of the sanitary and heating trades: Organize the local associations now.

THE WORK of revising the constitution of the Canadian Society of Sanitary and Heating Engineers has been well started, the sub-executive of the society, which is now meeting weekly in Montreal, having already drafted a new constitution. This is not in any

Question of definite form as yet. It is to be
Jurisdiction. much changed by the sub-executive

itself. Then it will be sent out to the various Provincial Vice-presidents, in order that their suggestions may be received. Later, all the members will be given an opportunity to suggest alterations which may seem to them needed.

But in embryo state though it is, the charter yet is far enough advanced to cast its shadow before. The shadow, moreover, has almost the appearance of a cloud. It seems to presage a storm.

One of the principal clauses provides for such steps as will authorize the formation of provincial associations, which shall be affiliated with, and under the control of, the Dominion society. It is this clause which officers of the Canadian society fear may meet with opposition.

The officers of the Canadian society believe it is for the good of the trade to have the provincial organizations branches of a central body. They are not seeking to take away any powers from the provincial organizations. What they want is to make one strong body which will have Dominion-wide influence.

IT IS GENERALLY difficult to make collections during and after the Christmas trade. Up to the holiday, people are too busy buying presents to settle old accounts, and, after the holiday, they haven't the wherewithal. Beeter get those outstanding accounts in NOW.

BURGLARS, last week, took two hundred dollars from the safe of a Northern Ontario plumber and hardwareman, which brings to mind the need for caution in leaving large sums in business premises over night. This view is not shared by one plumber, however. "If a burglar can find any money in my safe in the dark," he says, "when I have such difficulty finding anything there in daylight, he is certainly entitled to it for his cleverness."

A COMPARISON between a horse deal and taking an old stove in part payment on a new one is apt. Some stoves will be found mighty balky, and a dealer informs us that he has on occasions been loaded up with stoves which would not "stand without hitching."

Preparing to Stop The United States Invasion

Montreal Sanitary and Heating Engineers Become Incensed When They Hear That Contract for Plumbing, Heating and Ventilation Systems in New Hotel Has Gone to United States Firm—Claim This Competition is Unfair, Since United States is Blocked to Them—Low Figures of American Competitors Can Mean Only That They are Doing Work at a Loss.

Montreal, Nov. 13.—Something must be done to stop the invasion of the United States sanitary and heating engineer. With one accord those attending the recent meeting of the Montreal Master Plumbers' Association took this stand. They stood face to face with another instance of a United States firm coming into the city and underfiguring the local men, and they were in a frame of mind which demanded action. It was determined that the government should be urged to take steps which would forbid this competition from outside—competition which is not fair, since Canadian plumbing houses can not so compete in the United States.

The Cause of the Discussion.

Word had just come that the contract for installing plumbing, heating and ventilating systems in a new city hotel—a work worth in the neighborhood of \$200,000—had been given to a United States firm; and that in spite of the fact that several of the local sanitary and heating engineers had been so anxious to get this contract that they had submitted figures which would mean little or no profit to them. It was this announcement of the underbidding of the United States firm which aroused the members.

The tender of the United States concern was thousands of dollars below that of any Montreal firm. "There is no doubt about it," said one member, "that firm is either losing money, and a lot of money too, or it has been figuring on different specifications from those given me. At the amount mentioned in this contract I would have lost \$20,000 on the job. I do not see how the United States firm can make money here."

Always Lose on Contracts.

"They can't," declared another member. "They get the work but they always lose money."

Then followed remarks from a number of the association members, all tending to show that United States sanitary and heating engineers, who come to Canada and underbid Canadians, regularly lose. "They would have stopped giving such low figures long ago," states one man, "if their country were not so large. It is a firm from a different district which figures each time. Their engineers do not understand the climatic

difficulties. They do not understand the labor conditions, and give undue importance to our lower scale of wages."

A Case in Point.

"Yes," commented another member. "Do you remember Mount St. Mary Convent?" And then was recounted the story of a United States contractor who figured on the plumbing and heating of this large Montreal building; how his figures were much below those submitted by any Canadians; how he was awarded the contract; how he lost all he had; and finally died, apparently from worry.

Only one thing, according to the master plumbers present, would make the low figures quoted by these United States firms possible, that is a laxity on the part of the customs officers. The goods specified for much of the work on some of these buildings are American. The United States firms, therefore, can get these without paying duty. But when they attempt to bring them into the country they should pay this duty. It is thought this has been done, but the Montreal plumbers intend to watch the point. They declared their intention of looking to the customs carefully, to see if the supplies for this new hotel are passed through properly.

No Feeling of Animosity.

In doing this they are actuated by no hard feeling toward the man who has been awarded the contract. But they want this question of United States competition properly tested. They want to find out how the United States engineer can afford to figure so low. They want to see exactly where an injustice

is being done the Canadian plumber; for that an injustice is being done none seem to doubt.

After a lengthy discussion the whole question was turned over to the sub-executive of the Canadian Society of Sanitary and Heating Engineers, now meeting weekly in Montreal. This sub-executive felt in turn that the subject was hardly one for them, and referred it to the legislative committee of the society, whose president is H. Mahoney, of Guelph.

Methods of Procedure.

The problem is now in splendid hands. A letter received from Mr. Mahoney states that he is already making investigations. His one regret apparently is that he does not hold a seat in Ottawa so that he might have an opportunity to introduce such legislation as would make this United States competition impossible.

H. B. Ames, the new member for St. Antoine Division, Montreal, may also be asked to study this question, and to seek in Ottawa legislation which might prove effective. Just prior to the meeting of the local order, at which this important subject of United States invasion was discussed, the members had attended a luncheon of the Builders' Exchange at which Mr. Ames had spoken. He there showed his thorough sympathy with the trade, with its difficulties and hardships, and some of the plumbers felt he would be just the man to investigate and take action upon this question which is of such great importance to sanitary and heating engineers all over the Dominion.

Some Topics of the Ontario Convention

Organizing of Local Associations to be Proceeded With—Some Talk of the Establishment of Permanent Headquarters — The New Name is "Catching On."

TORONTO, Nov. 1.—It is agreed on all hands that the Thanksgiving convention was a great success. The fact that the charter was secured in time for consideration and adoption at the meeting was enough in itself to assure success. Added to that was the representative attendance and the enthusiasm of all present, making the con-

vention a red letter one. With the capable officers now in charge, there is no reason why the next year should not see the organization work carried to the high state aimed at.

* * *

In his report, Secretary Frankland brought out the fact that, in advertising the convention, he had written to mem-

bers of the trade in every city, town and village in the province and had as a last resource sent three hundred and fifty post cards, urging attendance at the convention. He had received twenty-eight replies in all—seventeen saying they would be on hand, and eleven expressing their regrets. "It is a shame," said the secretary, "that the trade do not consider it worth while answering communications with reference to association matters."

"You were lucky," put in George Cooper. "When I was president of the National I sent out 1,200 letters and got three replies."

George always could go you one better. Seriously, though, it is one of the worst features of association work that members will not answer letters. Let's all turn over a new leaf in this respect now.

One of the first practical steps in connection with the organization of the new society was taken on the suggestion of President Legrow. C. S. Avery, of Hamilton, had been explaining the difficulties they were laboring under in the Ambitious City in getting a local association. "If I were to send over the secretary and a live man from Guelph to get you organized in Hamilton," said the president, "would you be prepared to pay the expenses?"

"We certainly would," replied Mr. Avery. "Send them on."

"Very well. I'll get Frankland and Mahoney to go over there soon. Those two could talk you into anything."

"Look here," put in John Eggett, "does that offer apply to London, too?"

"It does," affirmed the chair. "We will guarantee to supply men to perfect local organizations in any city or town if the local men will pay the expenses."

It is highly probable, therefore, that steps along this line will be taken very shortly to bring a number of important points into line.

A chief of police as a plumbing inspector! The idea borders on the ridiculous, doesn't it? And yet there are some chiefs of police in Ontario who are officiating in that capacity in a mighty capable way. W. J. Boyce, of Wingham, told at the convention of the way in which the head of the Wingham force goes about his duties. He has picked up a pretty good notion of how to inspect a job, and he is very thorough; climbs up under the joists and even goes up on the roof to see that the test is carried out thoroughly. Geo. Cooper told of having a policeman inspector go over a job of his in a provincial town some years ago. The chief did things up so systematically that George carried

back to Toronto a new idea of the ability of the country constable.

The name "plumber" will soon be a thing of the past, if this experience of Frank Maxwell counts for aught. Frank arrived at the Temple Building early and stepped into the elevator. "I'm going to the plumbers' convention," he told the elevator man. "There's no plumbers meeting here," the man assured him. Frank decided that he had made a mistake in the building and went back to the main floor. He there made enquiries of the janitor. "Perhaps you mean the sanitary engineers," said the janitor. "You're right," replied Frank. And he went back to the elevator again.

During lunchtime at the convention,

talk drifted to the advisability of having permanent headquarters for the society. Some went farther than that and talked of establishing a club for the members. The idea met with favor, and it is not impossible that it will be carried out some day in the not far distant future.

S. J. Cherry, of North Bay, sent in a letter, suggesting that as ventilation was now an important phase of the work, the name should be changed to Sanitary, Heating and Ventilating Engineers. The matter was discussed and left over until the next convention on Good Friday.

Geo. D. Clewes, of the Montreal Rolling Mills Co., presented each delegate with a neat leatherbound memorandum book and a pencil.

Keeping Tab on the Journeyman

Forms are Used in Winnipeg Which Enable Master Plumber to Tell What Kind of Man He is Hiring—Proposal That System Should be Used More Generally—It Will Be Discussed at The Approaching Convention.

WINNIPEG, Nov. 13.—In these days when big jobs have to be hurried, that a contract may be finished on time, it is absolutely necessary that a master plumber should have men working for him upon whom he may rely. He does not want to have a man jump his job during a particularly busy season.

But the number of plumbers who have thus been left in the lurch could not be counted upon the fingers of both hands. There are very many journeymen who consider it a point of honor to leave an employer only after giving a fair warning, but every man who has been in the business knows that some there are who seem to take a delight in getting a man at a disadvantage—in getting him when he has some big work half done, and then threaten to leave unless certain concessions are granted.

Benefits the Good Men.

It is to keep the master plumbers advised to such men, and to give the steady, honorable men the preference, which is their right, that has lead the Winnipeg Local Association to prepare an application form to be signed by all men seeking employment. Now there is talk of having this form submitted to the convention in Calgary. There it will be discussed, and locals all over the country will quite likely be recommended to adopt such a system.

The blank used in Winnipeg is reproduced here. It will be seen that the man gives facts about himself, and then states the work he wants. After this, he is required to tell where he has work-

ed before, in what capacity and for how long.

Can Prove Statements.

The blank, sent to the secretary of the local can be proved; and if the information the man gave is not correct, it is at once known what kind of a

Application for Employment

NAME	Date		
ADDRESS	City		
NATIONALITY	Place of Birth		
MARRIED	Yes or No		
WORK WANTED AS	Name of Employer		
PREVIOUSLY EMPLOYED	BY WHOM	DATE	REASON FOR LEAVING
REMARKS			
DATE EMPLOYED			
DATE STARTED			
DATE QUIT			
REASON			
REMARKS			

Employment Blank Used in Winnipeg.

workman he will likely prove. If, however, the information given is accurate, as has usually been found the case, the form is filed to act as a future reference for this man.

The lower part of the sheet, it will be noticed, provides room for an employer to state when he engaged the man; when the man left, and why. This will also be filed later with the secretary of the local association.

Notice the way this works. A man comes seeking employment with a master plumber; he states he has been with one firm so many months, and declares he is a competent workman.

"Wait a minute," says the master plumber.

He goes to the telephone; rings up the secretary, and asks about the man.

History of Journeymen.

The secretary refers to his list, and is able to give a pretty comprehensive history. He can tell for what firm the journeyman has worked. He can tell if he has left any employer without giving fair notice. He can tell what he is competent to do. He gives the inquirer such information, that he is able to go back to the man seeking a position, and tell him at once whether he wants him or whether he does not.

This system would need to be operating two or three years before it would give its best results. But even before that time had elapsed, it would remove some of the chance work which is connected with the hiring of every man. An active local association would be needed to carry the system along properly, but it makes the usefulness of a local association patent, and so helps that association even as it is helped by it.

Delegates to the annual convention might well study this Winnipeg system. It apparently might be generally introduced with profit.

Engineers Object to the Charter

The following appears in the Canadian Engineer: The Plumbers' and Steamfitters' Union is again asking for a charter with the euphonious title. "The Canadian Society of Sanitary Engineers." They have been working along this line for over a year, and a committee from their ranks now approach the Provincial Government. Enquiry from Hon. Mr. Hanna elicited the information that they were about to be granted their request. However, the matter has been held open until the Canadian Society of Civil Engineers have had an opportunity to be heard.

It is hard to believe that an intelligent body of men, such as the Plumbers' Union, would make such an absurd request. One can hardly understand where any benefit would accrue to them if their application was granted. The term "Sanitary Engineer" in this case is a misnomer. The term "Sanitary Engineer" applies strictly to a small branch of the civil engineering profession, practically all the members of

whom belong to the Canadian Society of Civil Engineers. Any thought of the plumber qualifying as a sanitary engineer, brings to mind the old quotation, "A rose by any other name." The plumbers certainly should feel their dignity enhanced if their application is granted. Bill Dobbs, the plumber, will become Mr. William Dobbs, the sanitary engineer.

It is to be hoped that the Provincial Government will not allow this incongruity to pass, either in its present or in changed form. A committee representing the claim of the Canadian So-

ciety of Civil Engineers, and composed of Mr. C. H. Rust, president of the society; Mr. J. Galbraith, past-president; Mr. H. E. T. Haultain, chairman of the Toronto branch, and Mr. E. A. James, secretary of the Toronto branch, met the Hon. Mr. Hanna on Tuesday, October 24, to discuss the matter, and presented their reasons why this body should not be allowed a charter under the name of Canadian Society of Sanitary Engineers. At the time of going to press we have not ascertained whether their claims have been recognized.

(See editorial page.)

Toronto By-laws are 24 Years Old; A Committee Now Revising Them

Toronto, Nov. 2.—The plumbing by-laws of this city are admitted to be behind the times in many respects. A special committee, appointed by council, is working on the by-laws with a view to revising them so as to bring them up to date. They are twenty-four years old, and the committee is fully seized of the necessity of giving them such a revision that their original author could scarcely recognize them if he saw them.

Dr. C. J. Hastings, City Medical Health Officer, is chairman of the committee. Aldermen Yeomans and May, represent the city council on the committee; and the other representatives are: Architects, Edmund Burke; Builders' Exchange, Geo. Aldridge; Society of Engineers, F. R. Maxwell; Journeymen Plumbers, R. Hunniworth; City Plumbing Department, Chief Inspector Meadows.

One of the changes proposed in the by-laws is to establish a standard of quality for water taps in buildings. It is said considerable of the water waste is due to brass taps of inferior quality leaking, and this will be remedied. While the by-laws provide for a certain quality of lead pipe, no provision is made to secure the citizens against "shoddy" brass taps.

It is not likely that the committee will finish its work for a couple of months at least.

Strong Charges Made.

At a recent meeting of the Board of Education, Trustee Lewis made some startling charges as to the defective state of the plumbing in the schools. Mr. Lewis' statement came in explanation of a motion which he had submitted to the meeting calling for the appointment of a sanitary engineer whose duty it would be to maintain inspection of the plumbing in all the schools, super-

intend repairs and report periodically to the superintendent of buildings.

Mr. Lewis declared that he had visited some of the schools and had found conditions which, in his opinion, made such an appointment necessary and urgent. In sixteen schools, he said, where the smoke test had been applied, every one of them showed defective plumbing. Most of the schools had never had the plumbing tested at all.

Open Sewer Pipe Under Floor.

"In Lansdowne Avenue," said Mr. Lewis, "which I visited nearly a month ago, I found that the sewerage had backed up through an open nine-inch pipe under the floor and had overflowed to a depth of more than an inch. The flooring, also, was broken. I advised Mr. Bishop and his assistant, Mr. Waste, of the conditions and Mr. Waste promised to go down to the school at noon.

Mr. Bishop Explains.

Superintendent of Buildings Bishop, for the first time in the history of the Board, asked permission to give some explanation. Conditions, he believed, were not nearly so bad as Mr. Lewis indicated. "The condition in the three schools named," he said, "sound very alarming, but I do not believe they are as bad as Mr. Lewis indicates. The plumbing in the schools is under the supervision of the Medical Health Department, and, in the case in which Mr. Lewis speaks of an open pipe beneath the floor, they instructed me to do nothing at present, as there was no immediate danger. Whenever they report anything wrong my department always does everything possible to supply a remedy. Furthermore, not only are the conditions in these schools not alarming, but I believe they are the worst that could be mentioned among all the schools in the city."



The Question Box



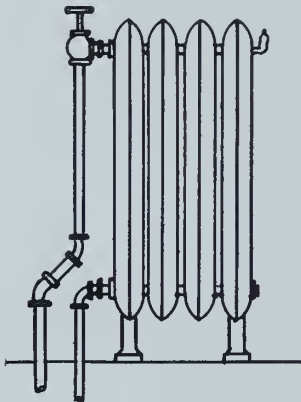
Subscribers are Urged to Send Questions to be Answered, or to Comment on Letters Published. Descriptions of Jobs Done or Shop Kinks are Also Invited.

"TOP AND BOTTOM" CONNECTION.

Editor Plumber and Steamfitter:— Have seen the words "top and bottom" connection on a radiator in reading some of the papers. Will you be kind enough to illustrate it by a drawing in some issue of your paper?

Nov. 6. JAMES MACK.

We give a drawing as requested. The valve will be noticed at the top. In some of these connections that we have seen, the offset of the 45 degree ells was run a little higher, and the valve placed where the return ell is shown, and the ell occupying the place of the valve.

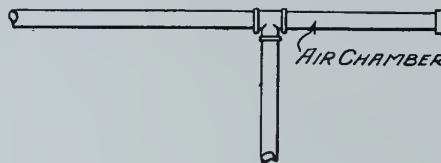


Sometimes the valve is so placed at the top that the union connection is made into a coupling on the riser pipe, thus throwing the handle in such a position that it does not rise above the top of the radiator, as shown. Again, some fitters prefer to run the pipe straight to the bottom of the steam supply valve without making use of the 45 degree ells, but such a connection throws the rising pipe at quite a distance from the radiator. This connection is applicable to either steam or hot water, and will enable the fitter to run his pipes nearer together in the place of spreading them. It also does away with all the work under the floors, thus obviating the chances of leaks that can not be readily got at in such a case.—D. C. H.

AIR CHAMBER ON A CORNER.

Editor Plumber and Steamfitter:— Some time ago, I had a job of water

hammer, at a place where I had put in some plumbing, and she banged a bit even after I had the usual air chambers on. So, at the end of a very long run



I put on an extra air chamber, as shown in the drawing that I enclose. The air chamber was placed in the cellar, and at the point where the main water pipe made a turn.

Toronto, Nov. 8.

A. C. G.

THE SMOKE TEST: HOW APPLIED.

Editor Plumber and Steamfitter:— Having always applied some other kind of a test to jobs and never used the smoke test, will you not please give me some pointers on it, and tell why it is better?

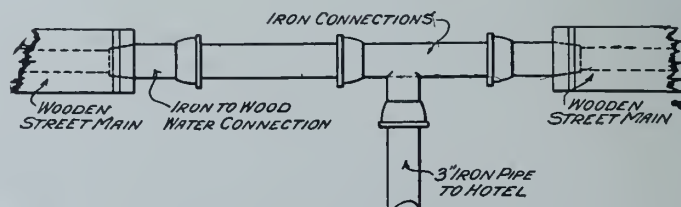
Nov. 14.

COUNTRY ONE.

In an air test, a small leak is very liable to escape notice, and if one's "smeller" is damaged the peppermint test is no good.

Smoke, on the contrary can be seen, and also will be smelled if the nose is working right.

There is a machine used for the purpose, having a blower that forces the air into a fire box in which there is a fire. In this box is put some material, such as waste on which oil has been put. The smoke is then run to the most convenient connection of the system to be tested, and, after the smoke is seen pouring out, the openings are all stopped up. Pressure from the smoke apparatus is then applied, and the smoke will come out of any splits or holes that there may be.—D.C.H.



UNSATISFACTORY RESULTS FROM GAS.

Editor Plumber and Steamfitter:— In a certain customer's house, the results got from the use of gas are most unsatisfactory. Not near enough light is obtained for the amount of money paid, and it is poor light at that. I hope that you can give me some advice that will be of help, and shall watch the next issue of the paper for a reply.

R.E.S.

If the gas jets in use seem to send forth the gas with a roaring sound, there is too much pressure, and the flame will be blue in color and not much light. In such a case, the gas burns very much like a Bunsen burner, and the thing to do would be to reduce the pressure.

Under almost any circumstances, the ordinary gas tip is a very wasteful and a very costly and ineffective piece of apparatus. If you desire to find out just how much so it is, install mantles on all of the burners on a house piped for gas. Allow them to be used for a month and then size up the gas bill with the one of the previous month where the open burners were used, and you will be greatly surprised at the result.

Besides, the mantles will give a vastly superior light. Sometimes the gas jet will smoke. This can be cured by getting more pressure on the pipes. It happens because the outer surface of the flame is too small and fails to take up the oxygen from the air fast enough to oxidise the carbon as fast as it is forced to the outer edge of the flame.—D.C.H.

WOOD TO IRON WATER CONNECTION.

Many years ago, on some parts of the continent, pipes made of wood were in use for water mains. Some of them are

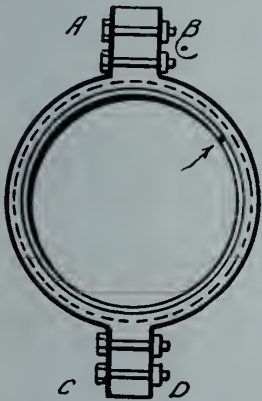
in use at the present day, and are holding good after from fifty or more years service. The following drawing, published in another trade paper, shows an ingenious connection that was made, where it became necessary to make a connection to the old wooden water main that had been in use for years. The drawing and the manner in which the connection was made will explain itself, without more words from us.

BANDING A SPLIT PIPE.

Editor Plumber and Steamfitter:—If a steam pipe happens to open up on a job, is it a practical thing to make repairs on it? If so, what is an easy manner of doing it?

Montreal, Nov. 8. J. SOMERS.

It can be repaired, hastily and effectively, by using some good iron cement, and banding the pipe and clamping down the band as shown in the



drawing. The band can be made of copper or tin, and should be fitted quite exactly to the pipe. Smear the cement into the crack, put on the band, and then fasten tight as per the drawing. The steam will have to be blocked while the operation is on, and if it chances to be a hot water job, the water will have to be drawn out at the main, or below wherever the crack happens to be.—D.C.H.

SIZE OF PIPES.

Editor Plumber and Steamfitter:—I have a job where the pipes connecting the water front and the 40 gallon range boiler are one-half inch in size. The boiler seems to heat up all right after a while, but not very fast. Do you think it would make any difference if the pipes mentioned were increased in size, and how large would you make them?

Nov. 13. J. HIGGINS.

The half-inch pipes might answer all right if the range boiler was some smaller. Even at that, there would always be a chance that they would stop up quite easily with the kind of water that is generally met with in this country.

Under the circumstances you mention, we do not consider that the pipes are large enough, and should recommend that they be increased to three quarters in size, and that in putting the larger size in, you be sure to observe that all the pipes are well reamed. Otherwise, you will have them but very little larger than the half-inch pipes and may be not that, if the wheel on the pipe cutters happened to be quite dull.

In putting in these pipes between the front and range boiler, see that they are given the right pitch, and that as few turns are made as is absolutely necessary to make the connection. Put a level on the water front and see that it is not trapped. Many times trouble will be caused by the fronts holding air because it does not set level.—D.C.H.

STEAM TRAPS.

Editor Plumber and Steamfitter:—Is there any way in which a line of radiators at the same level as the boiler can be made to heat successfully?

C. SIMONDS.

Writer does not state whether the job is to be steam or hot water. In case it is a water job, there have been articles published in this paper showing just such layouts. It would not be a difficult matter at all. If the job is to be heated by steam, there are two ways in which the result may be accomplished. One would be to heat the part of the job above the water lines sufficiently by steam, while the radiators that were below the water line might be heated by hot water, a separate connecting pipe and return being taken off for the purpose below the water line of the boiler.

Another manner in which the result can be obtained, would be to make use of some reliable steam trap, working at a low pressure, by which the waters of condensation could be returned to the system. If you wish to obtain further knowledge regarding the steam trap and its various uses, we recommend that you write to some of the manufacturers of those specialties and get their catalogues, in which will be found some valuable information, which may lead you towards making efforts for a lot of very paying business which you will find has been overlooked in your vicinity.—D.C.H.

EXPANSION OF PIPES.

Editor Plumber and Steamfitter:—Is there any customary allowance that is made when one is laying out the steam or hot water pipes on a job of heating? If so, will you tell about it in the paper?

Winnipeg, Nov. 6.

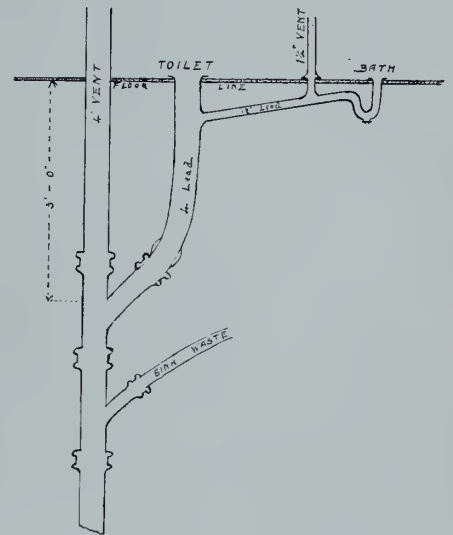
L.N.H.

We believe that it is customary by some fitters to allow about three inches per hundred feet for the expansion of

the pipes. In especially long lines of mains this expansion is taken care of by various means, such as loops, swings, or commercial expansion joints. Sometimes an arrangement that is called the "scissors" is made use of to take up the expansion. On long runs we have observed that the ends of the pipe were anchored thoroughly, and the "scissors" constructed in the middle of the run, thus taking the expansion from each way.—D.C.H.

TO REMEDY STOPPING UP.

Editor Plumber and Steamfitter:—I have enclosed sketch of a job I have had considerable trouble with. The toilet is an ordinary low down pattern, and is continually stopping up. Would it be better if the Y fitting was not so low down, as you will note it is 3 feet below the floor? Shall be glad if you



will give me your opinion through "Plumber and Steamfitter."

Wallachin, B.C.

W.J.

Subscriber does not state at which point the job stops up. Would advise that the next time a stoppage occurs, that he take the bowl off before he attempts to use the "plumber's friend." Unless we are mistaken, we think he will find that the closet pipe is stopped up. This could easily happen from projections left at the point where either wiped joint is made on the four-inch lead pipe.

If the pipe is clear and the job stopped up, there must be something wrong with the inside of the closet bowl.—D.C.H.

Municipal Undertakings.

Waterworks and sewerage systems are to be installed at Neepawa, Man.

A by-law will be submitted in Hamilton for a waterworks extension to cost \$530,000.

Farm Represents Fine Field for Plumbing Operations

In Some Rural Districts Many Farm Houses Have Already had Sanitary Equipment Installed—One Man Filled Fifteen Country Orders During the Spring—This a Good Season to Talk up the Subject With the Farmer—Extra Cost, Necessitated by Livery Charges and Time Wasted in Going to and From Work, Causes Some Trouble.

These are slow days on the farm—slow in comparison to those which have preceded. It is the season when the farmer has time to think of other things than his crops and his stock. He can even give some attention to the house, which throughout the summer has been entirely a care upon the wife. It is a season when the plumber may talk to the farmer about installing sanitary fixtures.

Of late years, the farmer has become greatly interested in plumbing. Many have had bathrooms equipped. Others are learning that this is possible, even though there is not a system of water works running past the door. Spring may be a better time in many respects for the installation of such systems, but fall presents one advantage over the earlier months—the farmer has more leisure to consider the question. The dealer can, therefore, now talk plumbing to him. Even if the work is not to be undertaken until spring, the effort will not be wasted.

Fifteen Farm Jobs Done.

George Millward, of M. Millward & Sons, Port Hope, states definitely that farmers are coming more and more to appreciate the value of up-to-date plumbing fixtures. In the spring of the year, Mr. Millward established no less than fifteen bath rooms in farmhouses, and states that he will equip some more before the year is out. Surely a new day has dawned on the farm—a day that is of immense profit to the farmer, and incidentally of value to those engaged as sanitary engineers.

"I think we have the city to thank for this business in the country," remarked Mr. Millward, in speaking on this subject. "Farmers and their families visit friends in the city. They find there all the modern conveniences. They miss these when they go back to the farm, and they begin to wonder why they cannot have them too. They know often that they are better off financially than their city friends who are blessed with these conveniences, so they begin to consider if the obstacles presented by the absence of sewers may not be overcome."

Various Modes of Water Supply.

According to Mr. Millward, this is done with great ease. The baths, wash basins, and other conveniences, which he has had installed in various farm houses this year, are fed with water in various ways. Some get this from a tank on

the roof supplied by a windmill; gas engines and air engines give the supply in other cases. The waste can easily be carried to a septic tank, which prevents all trouble, and guards perfectly against any unhealthy odors.

These fifteen houses, of which Mr. Millward speaks, were not all equipped with bathrooms at once. Some farmers got the idea from the city, as has been said. Others were inspired by neighbors, who had been inspired by what they saw in the city. So the desire for these conveniences grows, and so it is expected business with the farmer will grow.

But it is still true that every rose has its thorn, and all is not plain sailing in this business with the farmer. R. C. Chown, of Belleville, says something about this other side, and he too speaks from experience, having done a good deal of work for those living without the city.

Difficulties in the Way.

"Work on the farm," said Mr. Chown, "is more expensive than work done in city or town. To begin with, there is livery hire. It is necessary for the men to drive out, and for them to take the bath and other fixtures out in a wagon. Perhaps they have to come back to the shop for something, the necessity of which was unforeseen. It means time wasted.

"The charge for the work, on account of all these reasons, must be higher than for a similar work done within hailing distance of the shop. The farmer will likely hear of this. He does not see why this should be. To him it is another case of discrimination against him. He objects. Perhaps he received an estimate before the work is commenced, and notices that this is higher than the charge for a similar work done in town. Then it is necessary to explain why this should be."

Give Itemized Account.

All who do work with the farmer will likely have some trouble, such as that to which Mr. Chown refers. Yet the farmer is a reasoning being. Show him why the extra cost is necessary, and he will likely be content, if not quite satisfied. Of course, he wants the work done as cheaply as possible, but more than all he wants the work done.

It would seem the part of wisdom, however, always to give an itemized ac-

count. Even horse hire should be entered in this. Perhaps, moreover, much of this may be saved by securing an agreement with the farmer, whereby he undertakes to do the necessary teaming.

There is a fine field for plumbing operations on the farm. It is only touched so far. It will become more and more profitable as the plumbers talk it up with the farmers. But especially, will the plumbers improve their future prospects by doing well all farm work now coming their way. It is the sight of plumbing fixtures in a neighbor's house, and the assurance that these are giving satisfaction, which most of all leads farmers to install such systems.

Public Buildings.

A four-room school is to be built at Owen Sound.

An annex to the city hall is to be built at Montreal.

An extension is to be built to the Collegiate at St. Thomas.

An I.O.O.F. hall to cost \$16,000 is contemplated at South Vancouver.

A new academy is to be built in Kentville, N.S., next year at a cost of \$35,000.

The Board of Health at Strathcona, Alta., have advised the purchase of an incinerator.

A race course with stands, etc., to cost \$200,000 is planned at New Westminster, B.C.

Tenders have been called for the erection of a court house to cost \$22,000 at Mont Laurier, Quebec.

Plans are now being prepared in Chicago for the erection of a creamery plant, to cost \$250,000, on Burnell St., for the Crescent Creamery Co., Lombard street, Winnipeg.

C. A. Ryerson, manager of the Wizard Furnace Co., Toronto, has been in Yorkton, Sask., for the past two months in the interests of the Western Canada Foundry Co., Yorkton's new stove and heater industry. He has returned to Toronto for urgent business reasons but will be in Yorkton again shortly to complete the organization and start building operations.



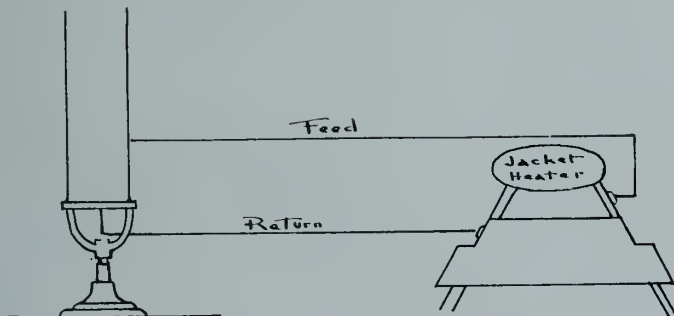
TOPICS OF THE TRADE



WHY HEATER EXPLODED.

Editor Plumber and Steamfitter. — "I was called in to look at a jacket heater the other day. It was hissing villainously, and I had not been in the place five minutes before it exploded with a roar like a cannon. The break occurred near the top, and the water shot right up to the ceiling, which was an exceptionally high one. The heater was practically a new one, having been in use for less than a year, and I was puzzled at first to find out what could have caused it to explode.

"The accompanying sketch will give you an idea of the lay-out—a poor idea,



because I am not an artist. The feed pipe was $1\frac{1}{4}$ inch and 1 inch, with a reducing elbow. I found that it had become so absolutely choked up with city water sediment that the steam could not work through. The pipe was choked to a foot or so beyond the second elbow. The result had been that the steam had been passing out to the boiler through the return pipe. It had curiously enough worked fairly well, despite the fact that the feed pipe was not in use at all."—A. F. P.
Toronto, Nov. 3.

PITY THE POOR PLUMBER.

Editor Plumber and Steamfitter.— "Pity the poor plumber! I was called in recently by the manager of a trust company, and instructed to go over a house which had just been vacated by a tenant. The tenant's rent having been in arrears three months, his removal had been brought about with considerable difficulty, and the manager suspected

that he had 'taken it out' on the premises before leaving. He certainly had! Not only was every window in the place broken, but the fellow had choked up six feet of soil pipe under an outside hopper, with bricks. Two of us got busy breaking the pipe down from the top and removing the bricks, and it took us a couple of very miserable hours to finish the job."—A. T. C.

RESTAURANT SANITATION.

Editor Plumber and Steamfitter.—"I saw in a recent issue of your paper that some Toronto plumbers objected to

"But the ice cream parlors are no worse than a good many restaurants. I was called in the other day to one 'hashery' to do a little job, and I found that their sanitary arrangements were as shown in the accompanying drawing. Everything was kept in the ice-box—meat, vegetables, milk. The wastepipe had a gate valve, which had to take the place of a trap. The waiters were supposed to attend to the valve, but they generally forgot it. You can imagine the result.

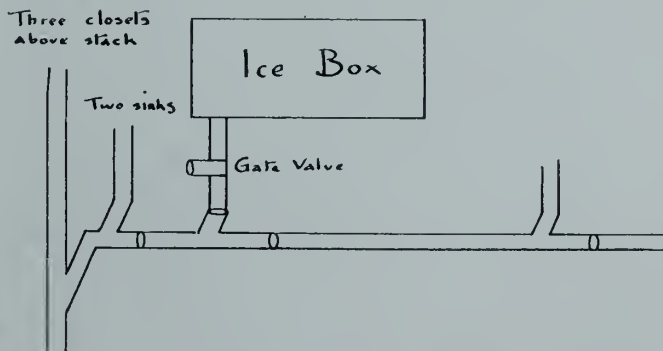
"Isn't it time that these public places, where there is such a great need for care in sanitary matters, were inspected?"

Yours truly,
Urgent.

PRICE CUTTING.

Editor Plumber and Steamfitter. — "You have had a great many articles of late about price cutting. Keep it right up, for you can't say too much on the score of this curse of the trade. There are some men in the trade who figure so ridiculously low on every job they put a tender on, that they not only have the sheriff around looking into their case sooner or later, but they make it impossible for anyone else to make a decent living profit. We have a couple of them in this town.

"One of the two failed about a week



lay-out in your paper was typical of the kind we have here, only we could show you some that were a lot worse. In my opinion, it is time that the authorities 'got busy.'

ago with liabilities heavy enough to smother the biggest firm going. The creditors say that it is like looking for a needle in a haystack to find the assets.

"Now let me tell you some of the methods adopted by this man. I have seen him walk into a house to figure on a job which would total well up in the hundreds, and give a figure on guesswork. He never bothered to do any figuring on paper. Time and again he has cut under the rest of us, not by just enough to get the job, but by huge margins, which have made the people think the rest of us are robbers and thieves. Not so long ago I figured on a job and, as I knew that he was coming in too, I kept my figure down just as low as I could. I put in for \$716.50, and figured that I would probably make \$30 over and above the percentage for overhead expenses.

Well, he got the job, and I found that he had put in a tender \$105 less than mine had been. Is there any wonder that he has gone down and out?

"This price cutting is a serious matter. It is bad for the master plumbers and equally bad for the manufacturers and supply men. How many supply men have escaped without a few heavy losses through failures during each year? None, I'll warrant.

"If anything can be done to eliminate this ruinous and preposterous practice, let's get busy and do it."

Yours,
O. M. P.

Water Supplies for Rural Homes

(Continued from Oct. 15 issue.)

Leaky points are undesirable, both because of the contaminating effects and because the liquid is needed to carry the solid matter through the pipes. The joints should be well made and the space between the spigot and hub should be filled first with a small rope of oakum. Then the remainder of the space should be filled with mortar, made of one part portland cement and one part clean sand. Care must be taken that no projections of cement or oakum be left in pipes at joints, as the flow will be retarded. A small quantity of sawdust in a sack drawn through the pipe at the time of laying by means of a long hook, brings any pieces of waste ahead of it, and leaves a clean pipe behind.

The septic tank should be some distance from the house and of such size that it would empty once a day. The size to be calculated on the basis of the size of the household, assuming that twenty-five gallons of sewage per person per day is a fair estimate. For a household of eight persons, the cubical contents should probably be twenty-four cubic feet, or a tank four feet long, three feet wide and two and one-half feet deep, allowing some space above for gases of decomposition. The tank can be constructed of concrete of a rich mixture in order to make the walls impervious as possible. The walls should be six inches thick, and plastered on the inside with a neat mixture of cement and water.

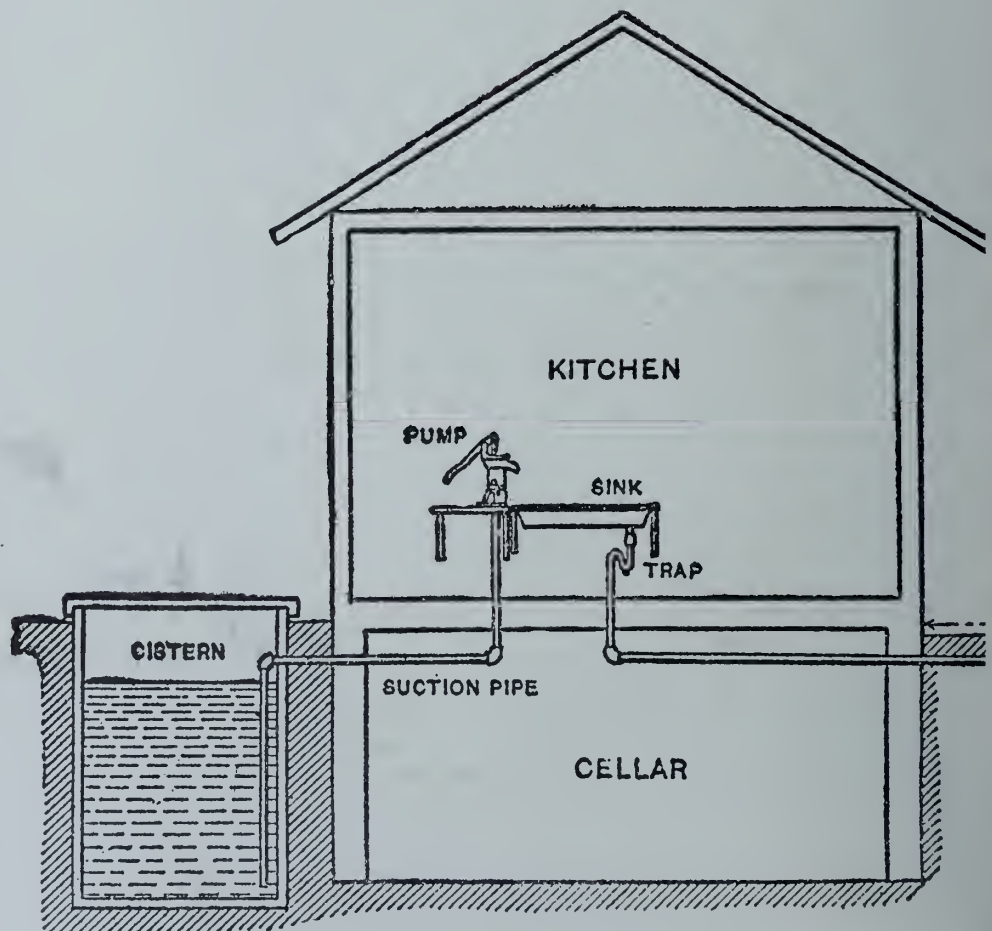
The diagram above shows the part and in part the action of the siphon in carrying off the sewage once a day. The siphon itself should operate in a separate chamber, which is usually a part of the septic tank, but separated from the

whole sewage by means of a four-inch partition wall of concrete. Communication between the two compartments is accompanied by using a two-inch pipe, with a T-trap as shown at F in the diagram. This pipe controls the height of the sewage in the septic tank. As the septic tank is filled, the sewage runs into a second compartment through pipe F. As this second tank fills the

air in the leg it is gradually compressed until the seal at K is broken, and siphonic action begins, which continues until the compartment is emptied. A vent H is provided so that if the siphon itself should ever be accidentally clogged up the sewage might run out without going through the siphon. The top of the vent pipe should be about one inch above the bottom of the pipe F, so that it will not drain the sewage when the siphon is in working order.

When the sewage is drained into the septic tank, it is first acted upon by the anaerobic bacteria, which breaks up or decomposes the organic matter in the sewage. This decomposition results in the production of gases which must not escape back through the house drain; for this reason the outlet is trapped as shown at S in the diagram. The escape of gases is permitted through the upper leg of the T-trap F, thence into the outlet pipe L, through the vent pipe H. After the sewage has been acted upon by the anaerobic bacteria in the septic tank, it is acted upon and practically purified by the anaerobic bacteria, which operates only in the presence of oxygen.

The sewage after having been flushed out of the tank is delivered into either a surface or sub-surface irrigation system.



Plumbing, Its Regulation and Installation

J. W. B.

The Following Article is Written by a Man Who is Closely in Touch With the Situation—Although Engaged in Working for the Journeyman, the Writer has Taken up the Subject From the Broad Standpoint of the General Good of the Trade—Editor's Note.

IN the plumbing industry to-day we are confronted with this great problem: "What can be done to protect this industry and the people from the unjust and injurious competition that has arisen in the trade by the employment of cheap and inferior workmen, and the uses of cheap and inferior and unsanitary devices that are the curse of the trade?"

Having to travel all over this Dominion, I am brought face to face with the terrible conditions prevailing in the trade, both for the employer and employee, alike. I feel duty bound to sound a warning and bring the conditions of the industry forward, with the hope of creating interest and putting forward united efforts to overcome the conditions that we have, and which are getting worse as time goes on.

The sanitary and plumbing departments of a city should hear the same ratio and consideration as to its efficiency as the fire department. While one protects personal property, the other protects the lives of the people, which is the greatest asset of any nation, and, therefore, entitled to the fullest consideration by our municipal and legislative bodies to the end of making laws for a more uniform system adaptable to the requirements of the community, with strict regulations regarding the installation of same and a proper system of inspection by practical men, combined with the examination and licensing of mechanics to work at the trade.

I will in a future issue deal with the various cities and towns, and show what is being done in the industry, and I hope to show the readers of this journal the necessity for some united action on the part of those interested to bring about the desired result. The need of a uniform system was never more apparent than it is to-day. With the advance of the sanitary science, we should be in a position to have legislative enactments framed for a uniform system based on the sanitary sciences, and covering cities and towns of over 5000 people throughout the country.

To-day, with our multiplicity of systems based only on the knowledge and requirements of some engineers who have only a partial knowledge of the sanitary science, the industry runs wild and allows of cities and towns adopting all forms of condemned and unsanitary fittings. Unskilled workmanship creeps into the industry to the great detriment

of the general public, and those engaged in the trade. With the advance of our country and the great growth of our cities and towns, local bodies will soon be forced to take into consideration some adopted general form of sanitation that will allow of expansion, without alteration and renewal like a good many would have to undergo to-day if they wished to bring themselves into line with an up-to-date system. And this can only be accomplished when we are in a position to have adopted forms of systems and appliances based on the latest requirements of the industry.

General Buildings.

Plans are being prepared for a \$30,000 school at Copper Cliff, Ont.

The Positive Clutch & Pulley Co., Toronto, are contemplating the erection of a factory to cost \$18,000.

It is reported that about \$250,000 will be spent on additions to the C.P.R. hotel at Banff, Alta.

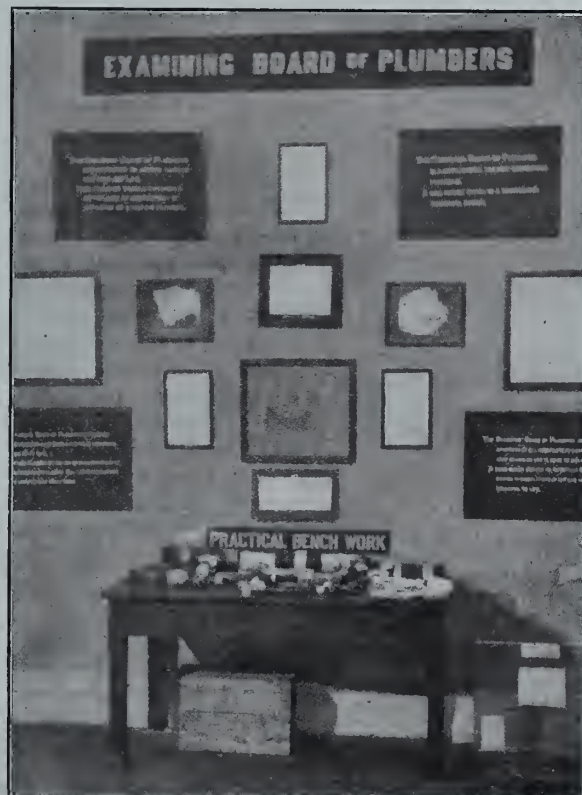
Plans are being prepared for the erection of a hotel at Saskatoon, Sask., to cost \$45,000.

A permit has been granted to the McCormick Mfg. Co., London, for a sprinkler tank and system to cost \$16,000.

A by-law will be submitted to the ratepayers of Meaford to authorize a loan of \$15,000 to the Meaford Manufacturing Co., for the erection of an additional factory and sawmill.

The Cost of Running a Modern Big City

Budget Exhibit at New York Brings Out Some Interesting Facts.—Exhibit by the Plumbing Board of Examiners.



NEW YORK, Nov. 6.—The Board of Budget Publicity held their annual budget exhibit this year from Oct. 2 to 28, at 330 Broadway. It occupied three spacious floors and gave an adequate idea of the methods and the expense involved in running a big metropolis.

It costs about \$175,000,000 a year to

run New York, and the object of the budget exhibit has been to show just exactly how and why the money is spent.

One of the most interesting exhibits was that put in by the Examining Board of Plumbers. As will be shown by the accompanying illustration, reproduced from the Metal Worker, the wall in the

examiner's corner was hung with panels containing, among other phrases, the following :

"The Examining Board of Plumbers throughout the country have been a factor in lessening the death rate. Your good plumbing system may be made insanitary by an incompetent plumber. See if your plumber has a certificate of competency."

"The Examining Board of Plumbers advances the interests of all occupants of houses which have drains or are in need of drains. A good water supply is important. Proper drains

to carry it off after use are equally essential to life."

"The Examining Board of Plumbers is a safeguard against dangerous plumbing. A bad house drain is a dangerous domestic enemy."

"The Examining Board of Plumbers was instituted to lessen disease and prolong life. Your plumber should possess a certificate of competency if employed as a master plumber."

Some Interesting Points.

Other panels showed the question sheets giving a specimen of questions to

be answered by the applicant to test his intelligence and knowledge of the theory of plumbing in general. Also a blank plan showing a distribution of plumbing fixtures in a dwelling. The applicant is required to draw the lines showing a complete plan of house drainage. Efficient bench work as required to pass the necessary examination was shown on a table in connection with inefficient work. During 1910, 261 applicants were examined and certificates of competency as master plumbers were issued to 109 of these. For the first six months of 1911, 125 took the examination, 48 of these having passed.

Advertising for New Business

Opportunities Presented by Printer's Installing Modern Bathroom Equipment—
k for Extending Scope of Operations—Development of Electrical Specialties S
Working up Business in Selling and Inhold Help Plumbers to New Business.

The great bulk of newspaper advertising done by the plumbing trade in Canada, seems to be based on this text: "If you need me, this is to let you know my address." Very few plumbers adopt the more aggressive tone, which now dominates the advertising of nearly every trade, and results in the creation of new business, as well as in the satisfying of a demand that already exists. That is to say, modern advertising has an insistent note, which drives home the assertion. "You do need me," without any ifs or conditions.

Aim of Plumbers' Advertising.

Such is one of the modern aims of newspaper advertising. Another aim is to let people know where they can buy certain goods or obtain certain services that they really require, and this is what the majority of plumbers appear to consider the sole purpose of advertising. So, they are content to give their name and address, along with the statement that they will make repairs promptly.

In giving the matter consideration, however, it would seem that the plumbing business offers many fine opportunities for advertising with a view to create a need which, possibly, is not at present felt by the public. As a matter of fact, the great advances in sanitation which have been made during the past few years, are not very familiar to the general public, and they would, no doubt, be quick to see the advantages of modernized equipment, if they had any definite idea of the articles and cost of installation.

Some Lines That Should be Advertised

Advertising for the purpose of securing

new business, should be definite. Some one particular article should be pushed in each advertisement, and the copy should be frequently changed. In running through the catalogues of manufacturers or supply houses, the master plumber is sure to acquire ideas for his advertising copy.

For instance, there is probably not a town or city any place, where there are not to be found a great many of the old fashioned zinc or iron sinks, carefully built into a wooden casing, which, in the course of years has rotted and become a fine breeding place for disease germs. Contrast such a sink with the beautiful and convenient enameled kitchen sinks of the present day, and the wonder is that any of the old type survive. Possibly the only reason is that the family have become accustomed to the old-fashioned contrivance, and their attention has never been called to the discordant note it strikes, in an otherwise clean and orderly kitchen. Or, possibly, they have been vaguely thinking of replacing it with a modern sink, but they are afraid it would prove too expensive. In either case, these people would be right in line to be influenced by a good advertisement, setting forth the advantages of an enameled kitchen sink combining a drainboard apron, back and end piece, all in one piece. The ad. could be rendered very effective by quoting a price at which the plumber was prepared to install this fixture ready for use, and it would be surprising if new business would not result.

Boosting Modern Luxuries.

A kitchen sink is a necessity, and the advantages of a really sanitary enamel-

ed fixture are so obvious, that it should not be difficult to make an advertisement such as we have outlined, pay well, especially if it is illustrated by a good cut. But there are other comparatively new features, coming more properly under the subject of luxuries, which could also be boosted by the same kind of advertising.

The average bathroom equipment, consists of three pieces—lavatory, closet and bath. Yet manufacturers are now putting out many bathroom fixtures which add considerably to health and comfort, and which should be included in every up-to-date bathroom. Prominent among these, might be mentioned shower baths. These may be installed in connection with an ordinary bath tub, at a cost which should be within the reach of most people.

The reason more shower baths are not installed by plumbers is probably the same as that given for the prevalence of old-fashioned and unsanitary kitchen sinks. The public have not been sufficiently impressed with the advantages of this fixture. Or, if they do feel they would like to have a shower in their bathroom, they are afraid the cost would be beyond their means. A well-worded advertisement on this subject, should bring business.

Another fixture which could readily be sold and installed as a result of newspaper advertising, is the lavatory for bedroom use. This is a great convenience, especially in the guest room, and, if the public knew that its installation cost much less than an ordinary wash stand and toilet set, the plumber would

have a great deal more business in this line. There is no better way of educating the public to this fact than through newspaper advertising.

The three articles mentioned, have only

been selected at random and there are many others which could be advertised in such a way as to create new business for the plumber. In each case, he would have a profit on the goods as well as on

the labor of installing, and the advertising, which would bring business of this kind, would certainly be more profitable than that directed mostly toward repair jobs.

Proper Care and Management of Plumbing Apparatus

Set of Rules Issued by Master Plumbers of United States for the Guidance and Use of Property Owners—How Satisfactory Results Can Best be Obtained.

THE sanitary engineer is the greatest sufferer through the ignorance of the average householder on the score of the care and management of sanitary apparatus. Carelessness in looking after household appliances causes unnecessary trouble for the plumber. Some years ago the Master Plumbers of the United States issued a set of rules, which were printed in pamphlet form and largely circulated. They are reprinted herewith:

Water closets, slop hoppers, basins, and all other plumbing fixtures, should be thoroughly cleaned and scrubbed with soap, hot water and a cloth or soft brush at least once a week, and oftener if possible.

After cleansing closets thoroughly and other fixtures, let clean water run from faucets for a few minutes, in order to change completely the water in trap.

The same care and treatment should be applied to the floors and walls surrounding the closet. The woodwork of the closet seat should be kept scrupulously clean. All plumbing work should be exposed, or enclosed in removable covers. Under no circumstances allow rubbish of any kind to accumulate under closet basin or sink.

Use soap, warm water, and cloth or soft brush.

Under no circumstances use gritty substances in cleaning enameled surfaces. A cloth saturated with coal oil or gasoline will remove fly-specks, paint, stains and mineral water discolorations.

Keep exposed nickel-plated work brightly polished.

Keep woodwork rubbed dry and free from soil stains.

To properly cleanse the trap, a half teacupful of liquid lye or potash should be poured in each trap (except water closet trap) at least once a week, letting remain over night, when a good flushing should be given, which will not only cleanse the trap, but also the pipe.

A valuable cleansing agent for pipe may be found in occasional flushing with hot solution of common washing soda, copperas or potash.

The grease trap should also be cleaned at least once a week. This is done by unscrewing the cap on top of the trap, and taking out all solid or greasy mat-

ter with a long spoon, care being taken to get all matter from the bottom of trap as well as top. After cleansing, always let water run for a few minutes to change completely the water in the trap.

A metallic strainer should always be used in sink above the grease trap; no solid plug, under any circumstances, to be used.

After emptying slop jars into slop-hopper or closet, always flush the fixtures and its trap by pulling the chain attached to water tank above.

Make it a practice to use each fixture daily; and if located in an unoccupied room, require someone to turn on the water each day, in order to keep trap full of water.

This is important; otherwise the water in trap will evaporate, and allow air from sewer pipe into the room.

In leaving the house vacant during the summer, special precaution should be taken to prevent entrance of sewer gases into the house; therefore, all overflow holes in wash bowls, sinks and bath tubs should be closed with corks, or by pasting paper over the openings; then close the outlets with plugs, and fill basin and tubs with water to near the overflow line.

In the case of kitchen sinks it is best to remove the open strainer, substituting a plug strainer, closing the outlet with a plug, and filling the sink with water.

Wash tubs connected with sewers may be similarly protected, by closing the outlets and filling tubs with water.

In case of slop-hoppers and water closets, it becomes necessary to remove all water from the trap with a sponge or otherwise, and fill the trap with glycerine or oil, or with a solution of chloride of calcium.

In leaving your residence during the winter months, it is of the utmost importance to remove completely all water from supply and waste pipe, traps, fixtures and tanks, so that nothing can freeze. For this purpose a stop and waste should be placed at convenient point in supply pipe, and all supply pipe laid to drain at this point.

The kitchen boiler and water tanks should be emptied, and all overflows must be closed, traps filled with gly-

cerine, and the outlets of fixtures closed with plugs, as previously described.

The water closet trap should be filled with a strong salt solution to which may be added some calcium chloride. As an additional security the closet trap may be boxed up, and box filled with sawdust.

The same precautions should be taken on cold nights during winter, at least to the extent of cutting off the water supply from the house and closet and other exposed traps, as described above, and opening all basin and bath cocks, sink bibbs and faucets. In moderately cold weather a handful of common salt thrown in the water closet trap will prevent freezing.

You will see by the above that it is only intended to use for closets the regular toilet (tissue) paper, and it is not only against the law, but against your own interest, to use newspaper, or other stiff paper, as by its use you will certainly, sooner or later, stop up your sewer pipe, thereby causing a plumber's bill largely in excess of cost of regular toilet paper.

Don't forget to pull the chain attached to water tank after using the closet.

Should you notice any disagreeable odors about your closets, basins, or other fixtures, which you think are caused by defective fixtures or plumbing, notify the plumbing inspector or your plumber at once by mail or by personal notice, and it will be promptly investigated.

Lead pipe costs more than iron, but it lasts much longer.

It should be a criminal offense for a man to masquerade as a plumber.

Apparatus tested and guaranteed by a responsible factory cannot be sold at competitive prices.

The physician's business is to treat disease, the result too frequently of some alleged plumber's work.

The cheapest thing will prove the most expensive in the long run.

Defective plumbing means typhoid fever, diptheria, pneumonia, scarlet fever, and plumbing repairs.

Demand scientific plumbing under law. Select plumbing fixtures intelligently in plumbing show rooms.



POINTS ON HEATING

By
CHAS. H. DENISON



Chapter 18.

Unless you have been among 'em, you may not recognize the truth of the following pen picture, and to some who read it the thing may be only too true.

On a side street which was paved with cobblestones, the grass growing up in some places between same, there was a shop. In front of the shop there was a board sidewalk and to that same walk clamped to one side of the front door was an old range boiler that didn't have even a coat of paint to redeem its rusty surface. The object of the range boiler was to advertise (?) the plumbing business of Hopabout Gloom.

Mr. Gloom also ran a heating business connected with the plumbing end of the institution. To advertise the heating end of the deal he had the firepot of some old heating boiler setting on the sidewalk before one of the show windows of the shop. Say? Is that a true picture of the front of many shops in the business, or isn't it? What's that got to do with selling a job, I hear some one speak up and say. Once some poet made remarks about certain dark unfathomed caves as bearing a fine line of jewelry. Well, if a cave in the ocean can turn out gems of surprising value and beauty, couldn't some fine ideas come out of even a musty old plumbing shop?

All the ideas in the business are not behind plate glass fronts unless I am some mistaken, although there is more style to it. I am giving this instance for the very reason that I wrote some facts in favor of the craft in a previous article. Talk about the exception, maybe, to prove the rule.

Now here was a shop, like unto hundreds of other shops in the land. It did not have any show window to speak of, and no stock only what was absolutely necessary to carry on the business. One would say, to look at it, that there was almost no business at all done there; yet the man was running some ten journeymen, and if you know anything at all about the business you must realize that it takes some jobs to keep that number going all of the time and

no layoffs during the season. Was this man in the shop most of the time? You bet he wasn't. Was he on "the works?" Well hardly. He had a good foreman for that place and the fellow sure earned his money.

You know, as well as do I, that there are many in the business who are always waiting for the business, or the blue prints, to come to them, and then, as a matter of fact, they will figure the job. I had thought that this spirit, or rather that this frame of mind had nearly died out of the craft, but some recent investigations show me that it is still there, and liable to stick until time itself passes away. You'd thing that, with all of the preaching that has been done the thing would have died out, but get out and around into the shops and you will find what I say to be true, at least in certain sections of the country.

But this fellow did not stick to the shop, and, in fact, you could hardly ever find him there, so greatly did he pester the outside. But it paid him. You bet it did, in spite of the shabby shop on the side, which, in this particular case, seemed to cut no ice. The goods, I found out afterwards, were scattered on the jobs and never saw the shop at all.

Some odds and ends came to the shop, of course, but they were few and far between. You say that couldn't be done? What would you say of a man who never had any shop at all and yet did thousands of dollars of business each year and ran several men? Ever hear of any one like that? Could the ordinary master conduct a successful business and be like either of these men mentioned? He could if he was capable of so doing, but he'd have to change some of his ways and one of them would be his selling methods. Now each of these fellows that I have been splicing about had an unusual gift of gab and a happy way of putting things. Mr. Gloom's face would light up when he happened to approach a customer and the way he would light into them was a caution to behold. He went after the customer right into the customer's house. Bearded innumerable old lions (and lionesses) in

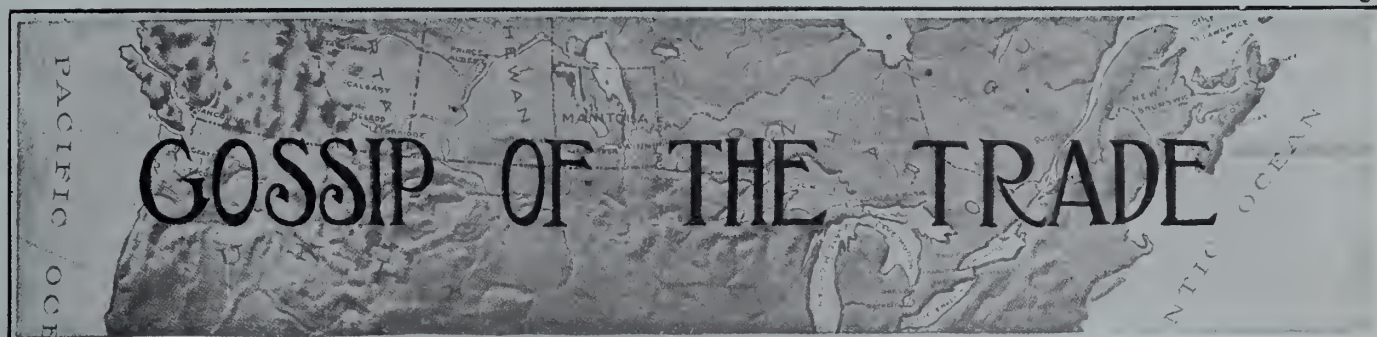
their den and came out on top every time, mostly.

He believed in selling the job, did this fellow. Now when I say "selling" that's just what I mean. Perhaps it would be more comprehensive if I said that he was the active party in the deal. You let a man go into a plumber's shop and already in his mind he has decided that he will have a steam job or a bathroom, as the case may be.

Now he buys of the plumber. Just then happen in and watch the plumber all swell up. He has made a sale, he has, and is a modern salesman, when really the customer has literally handed him that job. That's just where many of these master plumber salesmen are at this very day.

They are passive salesmen—not active; receivers, not pushers. Perhaps I have made the point somewhat clearer by the illustration given. I guess it must have been the personality in the man that got the results, for he sure did make the sales and had a goodly bunch of jobs on tap continually. Didn't seem to give a darn whether the customer knew anything about plumbing or heating or even wanted it or not; but went right at them all the same and got them interested before they realized just where they were, and then he had them hooked for fair. Now don't understand that he landed them all, or even at the first trial; but he kept after them and always had a goodly bunch well under cultivation. I guess that would come nearer expressing the situation than any other way that I could put it.

There are some men that could sell chewing gum to an old maid with a double set of false teeth and get by with it, and I guess that this fellow was one of them. Anyway he simply put it all over his competitors, and when I last saw him had just sold an old crank a bath room outfit and the old crank had the name of not having had a bath in twenty years. These things don't look as if they ever happened, but they did, and I have got some others to tell before I get through with this series.



Sanitary Sewers.

New regulation have been put into force in connection with the new sanitary sewers at Dunnville, Ont.

In New Quarters.

Henry Harding, Wroxeter, Ont., has moved his plumbing and tinsmith business into the Grand Central block.

Permit for Workshop.

A permit has been granted for a new workshop for J. Marr & Son, Calgary, to cost \$4,000. It will be of brick with a concrete foundation and steam heated.

A Bowling League.

The sheet metal workers of Toronto have formed a bowling league, and have appointed the following patrons:—A. B. Ormsby, G. Douglas, G. Wheeler, A. Matthews, B. Duthie, W. E. Dillon, T. Welch, G. Bryon.

Damages for Flooded Cellar.

Any interference with drainage is serious, as the Montreal Board of Control is finding out from sad experience. Paul L. Turgeon has now entered suit for \$5,000 damages, claimed because of the flooding of his cellar. This is but one of many similar cases.

A Disastrous Fire.

A fire occurred at New Glasgow, N.S., starting in the plumbing shop of Wm. Sutherland. It is supposed that a match was thrown on some oakum on the floor. The fire spread to the adjoining building of the Standard Printing Co., from which the News, the Standard, and the Guysboro Times are published. It was completely gutted.

Company Incorporated.

About two years ago, A. E. Ecclestone and A. S. Bates started in the plumbing business at Bracebridge. Since that time, the business has developed very rapidly. They have now formed a limited stock company, under the style of Ecclestone & Bates, with A. E. Ecclestone, A. S. Bates and George Fenn as provisional directors, with an authorized capital of \$20,000. They have undertaken some very large contracts in heating and plumbing hotels and other large buildings in Muskoka.

A New Tinshop.

Taylor Bros., Lanark, Ont., are now engaged in the construction of a large warehouse and tinshop to replace the old structure, which was burned down in May. Excavation was started on Thursday last. It will line up with the main store on George St. and will be 25 by 42 feet. The building will be frame with metal exterior walls, galvanized shingle roof and a concrete foundation. The firm intend to fit the tinshop up with a most complete equipment.

The contract has been let under rush orders, and the firm expect to be able to occupy the shop before the winter sets in.

Pleaded His Own Case.

John McKelvey, ex-mayor of Kingston, and a well-known plumber and hardwareman, was summoned recently to answer on an alleged violation of the city by-laws.

The charge was laid by the Concrete Paving Company, which has the contract for putting down four blocks of pavement in this city, and the company's representative claimed that Mr. McKelvey gave his driver orders to break down a barrier the company had put up over the newly made pavement and drive over it. The case was fought out in the court, and it was found that there was no city by-law to cover the case, and, therefore, the magistrate dismissed the charge, and at the same time the magistrate severely criticized the company for their slowness in doing the work. Mr. McKelvey fought his own case, and the company was represented by counsel.

Take to the Wilds.

The following story comes from Vancouver:—

The many new buildings going up in the outlying districts of the city demand of the plumbing inspectors the qualities of an African explorer, sometimes, to cover the ground, find the new places, often far out in the brush, and look over the work.

Chief Inspector J. G. Morgan covers the entire main part of the city as far as Main street. E. G. Bishop looks after the entire territory north of Fifth Ave. to the east limits of the city, while H. Simmers has under his jurisdiction all

the territory to the south, with all the territory south of False Creek in care of J. E. Masson, taking in the Fairview and Kitsilano Districts.

Miles of water mains have been laid, not only in these new districts, but in the outlying municipalities, where development has been most marvelous and is only just begun.

An Amusing Case.

An amusing case was fought out in the county court at Toronto, before Judge Denton the other day. A Toronto plumber was bringing action against one E. R. Reynolds, claiming \$412.39 on a contract for plumbing and radiation of No. 17 Wellesley St. The amount was made up of many small details, most of which Reynolds agreed to pay. One amount, however, of \$47 for changing connection, he claimed, was exorbitant.

The defendant acted as counsel for himself, and kept the court stenographer busy with his criss-cross fire of questions. He cross-examined the plaintiff and even claimed the right to plead.

"I suppose I have a right to argue my case, haven't I," Reynolds wanted to know.

"Of course, what have you got to say."

"I contend that the contract is not finished, and, therefore, the plaintiff had no right to bring the action," he said. "The English and Canadian cases are very clear on this point."

Mr. Reynolds cited numbers of cases from imposing statute books.

"If we had got together we could have settled it ourselves," said the lawyer-client, as a parting shot, "but when the lawyers get a hold of it they see how high they can run the law costs."

News Briefs.

E. Wright, Fort George, B.C., who is associated in tinning business with H. W. Gross and A. Buchel, has moved into a new store.

F. Laycox, a tinsmith with Fraser & Enticknapp, Weyburn, Sask., was taken to his home at Waskada, Man., this week with fever.

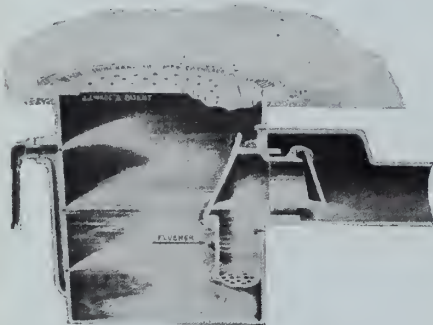
News of the Manufacturers and Wholesalers

EASTERN REPRESENTATIVE

Frank Dunn has been appointed as Eastern Canada representative of the Ideal Manufacturing Co., of Detroit. He will travel east of Toronto as far as the Maritime Provinces.

DRAIN-FLUSHING APPARATUS.

The Wade Iron Sanitary Manufacturing Co., 43 East Harrison St., Chicago, have put on the market what they claim to be an efficient preventative of the stoppage of house drains. The device consists of an accessible clean-out floor wash and back-water valve gate combin-



ation, as shown in the illustration. It is designed to fill an insistent demand for a floor-drain to be placed in floors of water-closet rooms, lavatories, wash-rooms, in toilet-rooms for public use and all other public conveniences where floors and walls are washed.

APPOINTED SALES AGENT.

Charles W. Chandler, for many years closely associated with the plumbing supply business in Ontario, has been appointed sales agent and representative in Toronto, of the Galt Brass Manufacturing Co. He will in future handle their line of plumbing brass goods. "Charlie" has been connected with the Ontario Lead and Wire Co., Somerville, Ltd., and the Standard Sanitary Co., and is probably one of the best known salesmen in Ontario.

NOON-DAY GATHERINGS POPULAR.

Montreal, Nov. 13.—The last luncheon of the Builders' Exchange proved a great success, so many attending to hear H. B. Ames, the new member for St. Antoine Division, speak upon labor conditions in Australia that difficulty was experienced in finding places for all.

These gatherings, which have proved so acceptable to those connected with the building trade, are not to be allowed to fall off in interest. The definite programme of speakers has not been an-

nounced as yet, but it is known that among those who will address the association are such authorities as C. E. Holgate, of Montreal; John Dewer, of Pittsburg, noted as an expert on all matters pertaining to paint and painting; Alexander Allaire, of Montreal, who will discuss "Modern Methods of Foundation Work," and Charles Hope-well, mayor of Ottawa, who is likely to give the members a change by speaking upon some subject relating to municipal affairs.

PERSONAL NOTES.

E. B. Fewings, of the Galt Gas & Electric Fixtures Co., has returned from a trip to the coast.

MAY LOCATE AT SARNIA.

Two representatives of the American Brass Works have been in Sarnia. Several offers were made, and they will be submitted at the company's annual meeting at Detour, Ill.

NEW PROCESS OF SOLDERING.

It is said that A. J. Pierce, a plumber of Holland, Mich., has discovered a new process of soldering cast iron. He claims to have given his process the most severe tests, and that the iron held firmly together.

PATENTS ISSUED.

Among recent patents issued in Canada are: H. H. Vaughan, a feed water heater; P. Lyons, pump valve; C. Brent, fire extinguishing stand pipe system.

INVENTS REGULATOR.

A Toronto plumber has invented a regulator which, he claims, will automatically remove the checks on a hot air furnace or boiler at any hour of the morning, and thus heat up the house before the occupants arise. It will be possible by the use of this new contrivance to set it at the desired hour and depend on the regulator to do the rest.

TAKES NEW POSITION.

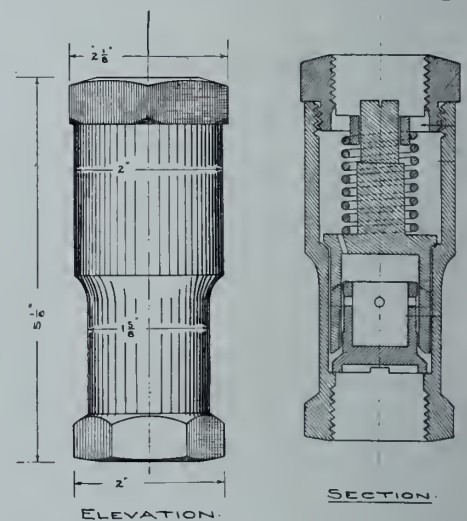
A. D. Dame, sales manager of Steel & Radiation, has resigned, to accept the position as general sales manager for Canada for the Master Builders' Method. Mr. Dame was with the Expanded Metal and Fireproofing Company as sales manager for about three years, and previously to that, had about twelve years' experience with the Galt Art Metal Company, and the Metal Shingle

& Siding Company, of Preston, Ont. He will make Toronto his headquarters.

A REGULATING VALVE FOR HOT WATER HEATING.

To convert an open hot-water heating system into one of the closed type automatically for the development of increased heat emission, a valve has been invented by Curtis E. Knickerbocker, and is now being manufactured and sold by the James Morrison Brass Mfg. Co., Ltd., 93-97 Adelaide St., Toronto. Some of the advantages claimed for this valve are, an increase of from 25 to 30 per cent. in heat radiation, and, a lower fuel consumption.

In use the hot-water heater is connected with the radiators in the customary manner and the usual expansion tank is employed. The automatic valve should be connected in the overflow connection above the tank. Under normal conditions the system is open and the feed pipe communicates with the atmosphere through a constricted compensating discharge passage controlled by a suitable valve. When the system is more vigorously operated to develop increased heat radiation, the temperature of the circulating medium increases and the fluid expands and tends to flow through this passage with sufficient velocity to force the control valve against its seat and transform the system into a closed one. The system may operate in this manner with the heating fluid at such a high



temperature that the heat emission can be very materially increased above that obtainable from the heating fluid in the open type.

The regulator, as will be noticed from the sectional view, consists of a casing

provided with a threaded lower flange and a relief valve mounted inside the casing. The relief valve is normally held against its seat by the pressure of the coil spring above it, which is so proportioned as to allow the valve to lift when the heating fluid has reached a predetermined maximum pressure. The hot water then passes out through the discharge holes shown on either side of the upper end of the valve stem to the discharge of overflow and thus prevents the development of any excessive pressure in the system.

The control valve for the constricted compensating discharge passage is normally held in the open position by its own weight and rests upon the upper edge of the lower threaded flange. The walls of this valve are pierced by four $\frac{1}{8}$ in. holes spaced at equal distances around its circumference. These holes and the annular passage into which they open form a portion of the constricted compensating discharge passage. The expansion and consequent pressure developed on the control valve when the circulating fluid is heated to temperatures approximating the boiling point serve to close the control valve by forcing it tightly against its seat on the lower end of the relief valve. The system thus operates as a closed one as long as the boiler is energetically fired, but as soon as the need of increased heat ceases and the furnace is not forced, the temperature and volume of the heating fluid decrease, the control valve

automatically drops to the normal position and the system operated as an open one.

MAKING NEW PACKLESS VALVE.

The Kerr Engine Co., of Walkerville, Ont., have commenced the manufacture, in Canada, of the "Simmons Patent Packless Valve," better known in the United States as the C.H.S. Packless Valve. It is claimed by the manufacturers to be perfectly packless, and an all-metal valve, there being no destructible composition rubber rings or discs, in the packless feature. The valve is substantial in construction, and is especially suited for use on vacuum systems.

FOUNDRY ANNIVERSARY.

New Toronto, Nov. 1.—To-morrow is the twenty-first anniversary of the establishment of the Pease Foundry on Seventh Street, New Toronto. It is the only business in the district that has run continuously for such a length of time. With the exception of holidays, the firm has never closed down since its inception. The foundry has been under the management of Mr. J. R. Phillips, the mechanical superintendent, from its commencement. Several of the men employed here have been with the business all the time, and they are to receive a suitable reward in recognition of the fact. The number of hands employed is more than double what it was a decade ago.

SOME CHANGES MADE.

Vancouver, Nov. 6.—W. E. Drake, the manager of the Vancouver branch of the McClary Co., has resigned, after thirty-two years service.

He will be succeeded by J. J. Foot, manager of the Winnipeg branch. Although no announcement has yet been made, it is understood that the Winnipeg managership will be filled by A. J. Clark, now manager of the Calgary branch. Mr. Clark in turn will be succeeded by his brother, D. George Clark, who for the past three years has been manager of the St. John, N.B. branch.

The managership of the St. John office will be filled by the promotion of George S. Bishop, who has been accountant there ever since the branch was opened.

AIR IN WATER.

Editor Plumber and Steamfitter:—Will you kindly tell me how much air there is in water? Does the air in the air chambers on a plumbing job ever get into the water on the job?

Vancouver, Nov. 11. R.E.S.

Under ordinary circumstances, at the pressure of the atmosphere it is stated that water will absorb about 4 per cent. of its bulk in air. Under higher pressure, water will absorb more air. Undoubtedly this explains why, sometimes, the air chambers on a plumbing job seem to fail to give good results. A way to remedy this, is to place pet cocks on them for the admittance of air, when such a thing happens.—D.C.H.

AIR IN RADIATORS.

Editor Plumber and Steamfitter:—Should the valves on the radiators of a hot water heating plant be opened once a week to let the air out?

Householder.

Toronto, Oct. 25.

If the system is properly looked after, it will be kept full of water and there will be no room for air, so that the precaution of opening the valves will be unnecessary.—D.C.H.

Fred Temple, a young man in the employ of Gillespie Bros., Orangeville, fell from a ladder while engaged in repairing some eavetroughing. He was knocked unconscious and remained so for a couple of hours, but fortunately was not seriously hurt.

A 12-room school is to be built at Tillsonburg.

The Board of Education, Vancouver, are contemplating an extension of the school system.

A \$700,000 opera house is under contemplation at Vancouver.

To Placard Houses as Unfit for Habitation

Health Authorities in Edmonton are Considering Plan to Enforce the Installation of Plumbing Fixtures in all Houses—Drastic Steps May be Taken.

Edmonton, Alta., Nov. 1.—Important amendments to the Alberta provincial health act are under consideration here. A conference was held recently between Dr. Whitelaw, medical health officer of this city, Dr. Irving, provincial health officer, and R. B. Owens, sanitary engineer for the province.

Dr. Whitelaw is desirous of obtaining power to close and placard as unfit for habitation, all residences which fail to install all the necessary plumbing connections when water and sewer are available. Hitherto the city has been handicapped in the enforcement of the provisions of the charter amendment of last session by its inability to placard houses which do not voluntarily comply with the regulations requiring the installation of water and sewer. The

city is in consequence compelled to undertake the installation of these conveniences at its own cost, and although the outlay may be assessed against the property, the city authorities desire to be able to compel such owners as can bear the expenditure, to undertake the charges without advances of money from the city exchequer.

Based on Clause.

The proposed new clause is based on a clause in the health act of Saskatchewan. This provides that any building used as a dwelling which through disrepair, filthy keeping or the existence of a damp site or faulty drains, or want of sanitary plumbing, is in the opinion of the health officer unfit for habitation, shall be placarded by the officers until such time as the cause of offense is removed.

PLUMBING AND HEATING MARKETS

MONTREAL.

Montreal, Nov. 14.—“Six weeks behind in our orders.”

This terse statement of a local manager shows clearly the position in which the supply houses are now placed. The heavy ordering has continued, and sales managers have been unable to get the goods to make possible prompt delivery.

This is more or less true in all lines but especially so with regard with radiators, for which a great call is still coming in. “We have almost enough of some kinds,” said the head of a local house, “but the demand for the smaller sizes is more than we can meet.”

One change in prices is noted this week, namely in lavatories, and sinks. All the makers have agreed to increase the price of these, but, as the goods themselves vary widely in price so do the increases. They have not been estimated in per cent.

Enamelware.—Outside of the higher price level fixed—an increase which comes as a natural result of the greatly increased demand—there has been little change over the situation of a fortnight ago. From all parts of the country the demand continues heavy. Especially has there been a marked growth in the orders coming from the west. There so much building has been going on that contractors do not seem able to get enough lavatories, baths, sinks, and similar goods, to fill their requirements. But orders are being shipped fairly promptly, and generally satisfactory conditions are reported.

Boilers and Radiators.—Here is where the manufacturers are facing great difficulties. Many of them have their plants working night and day, and yet they are unable to fill their orders in anything like a prompt manner. By every mail almost, come reproaches from contractors and plumbers whose demands have been long filed, and who are still waiting anxiously for the delivery of the goods.

For low pressure steam boilers a greater demand has come than was expected, so there is some trouble filling orders here. In the larger makes the manufacturers are able to hold their own. But they are now shipping directly from the factory. Any unusually large call would cause a delay.

The scarcity of radiators is not as real as it might seem. Some sizes can be secured with but little difficulty, but the small sizes, for which a great demand has sprung up this year, simply can not be turned out fast enough. All the old stock is exhausted, and orders still piling in make the present output seem but a drop in the bucket.

Soil Pipe.—The demand, and the hot weather of the past summer, have created a scarcity in this line. Those eight August days when many factories stopped work greatly decreased the reserve supply. It has been used up long ago as a result of the large orders. At one plant from 80 to 100 tons of ore are being melted daily, and yet the product is far too small. No changes in price have occurred.

Lead Pipe.—No new rise in the price of lead pipe has taken place in the past fortnight, but it seems likely that a still higher level will be struck before long. When pig lead is going up as it is, sooner or later all lead products must advance. Those handling this line are not at all anxious to sell in large quantities. Many dealers, therefore, who would like to lay in a good supply, are experiencing considerable difficulty in doing this.

Iron Pipe and Fittings.—Here too there is a scarcity. The prices of the piping, which dropped a few weeks ago, presumably to prevent the possibility of American makers selling their product here, are said to be on the point of rising. The decline in the United States, which preceded the decline here, was brought about by a drop in the price of the raw material. Now there has been an advance in the raw material, and a higher level for the pipe will, it is asserted, be struck before long.

Solder.—A good fall demand has been noted. Prices remain steady.

TORONTO.

Toronto, Nov. 14.—The demand for all line of plumbing and heating markets is heavy. That trade conditions are good in all parts of the province is demonstrated by the volume of business being done by the manufacturers and supply men. Rush orders are now being received, and shipments as a result are heavy.

Despite the large demand, the manufacturers are keeping pretty well up with their orders. While some shortages have developed, in no case is the situation serious.

Collections are reported to be rather better than usual. In all parts of Ontario, payments are being met with more or less promptitude.

Enamelware.—A general advance in enamelware has been made. This is due to a number of reasons, the most prominent being the advanced cost of material and production. It is probable, however, that the large demand has had something to do with it. At various

stages of the present season, shortages in certain sizes have developed, and the demand has been heavy in all lines. The advance in lavatories and sinks, is the heaviest increase, approximating 10 per cent.

Boiler and Radiators.—The heating trade is as heavy as at last writing. The manufacturers have filled orders pretty well up to date, but there have been temporary shortages in some sizes. There are now enough orders placed to ensure the continuation of active business conditions for some weeks to come. It is now safe to assert that the sales this year will far outstrip the records of last year.

It is understood that considerable difficulty is being experienced in getting radiators. The manufacturers are turning out supplies as fast as their plants will permit, but the demand keeps right apace.

Soil Pipe.—The demand is still heavy, though the volume does not show quite as heavy as a few weeks ago. Quotations on medium and heavy soil pipe are: 70 and 10. On the 7 and 8-inch sizes, the discount stands at 50 per cent.

Lead Pipe.—No further changes have been made in the price of lead pipe, though rumors of further advances are heard. Lead pipe sells at 7 cents a pound, and lead waste at 9 cents, with 25 per cent. off. Caulking is quoted at 4½ cents. The discount on traps and bends is 45 per cent.

Iron Pipe and Fittings.—It is reported that shortages exist in some sizes of black pipe. Some supply houses are short in 1½-inch, while others are out of 2-inch. Some weeks ago there was more or less of a shortage in all lines. The situation can, therefore, be said to have improved. Galvanized pipe, 1-inch size is quoted at \$6.02, and 1-inch black pipe at \$4.37. Other quotations remain the same as follows: Cast iron fittings, 65 to 70 per cent.; malleable fittings, 37½ to 40 per cent.; cast iron bushings, 70; malleable, 67½; nipples, 75 and 10; headers, 60 and 10, although some quote 67½ and 70; flanged unions, 70; malleable-lipped unions, 67½ per cent.

Solder.—The quotations for solder remain firm. Wiping, in the common grades sells at 21½ cents, the better grades as high as 25½ cents. Half-and-half is quoted at 27½ cents.

Metals.—Greater strength is shown throughout the list of metals this week than has been manifested for some time. Stock in the hands of jobbers are light, in nearly every important metal, and the shipments coming to hand are in a good many cases handled without warehousing. This is a highly satisfactory state of affairs, for sellers.

PLUMBING SUPPLIES

National Lowdown Closets
Imperial Lowdown Closets
Enamel Lavatories
Enamel Sinks
Galvanized Boilers
Enamel Baths
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Gas Fittings
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Hot Water Quick Opening Radiator Valve.

"Miller" Hot Water and Steam Radiator Valves

The bodies and bonnets of our Hot Water Quick Opening Radiator Valves are made in one piece, thus having a great advantage over other valves, as it leaves one less joint or possible leakage. The cone-shaped Disc prevents sticking.

Our superior Steam Radiator Valves have very low seats and a high lift of Disc.

We manufacture both valves from $\frac{1}{2}$ " to 2", with or without union, also union elbows.

Every valve is thoroughly tested and has an unlimited guarantee. They are built for service. Ask your jobber for them.



Steam Radiator Valve.

MILLER LIMITED, - LONDON, CAN.



KERR

Steam and Hot Water RADIATOR VALVES

are past the experimental stage.

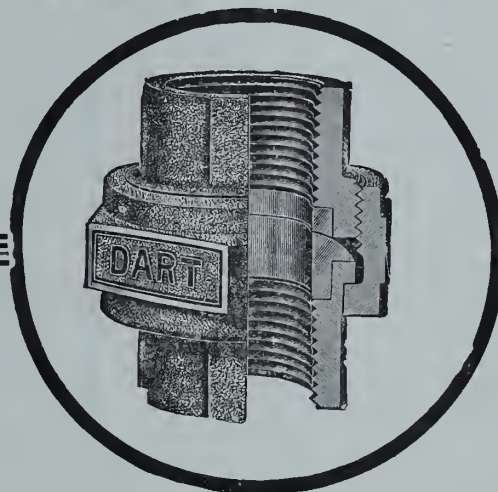
They set the standard for high quality in material and finish and stand the many tests of use.

Note the seats in Kerr's New Pattern J.D. Radiator Valves which insure perfect drainage.

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Prevents rust and corrosion at the joint, so assures a perfectly tight and lasting union.

Dart Unions make joints quickly and easily, whether in or out of line—joints that stay tight until deliberately loosened, then are just as good for use as before.

Your jobber will supply you, and their use will save a lot of installation time.

They need no further attention when installed.

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Condensed or "Want" Ads.

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MISCELLANEOUS.

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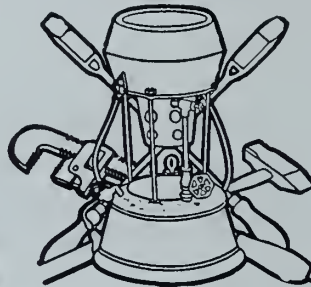
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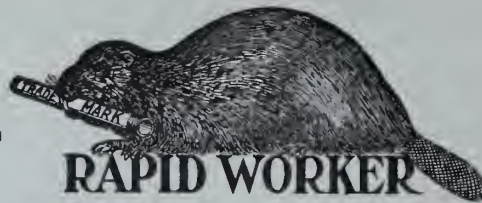
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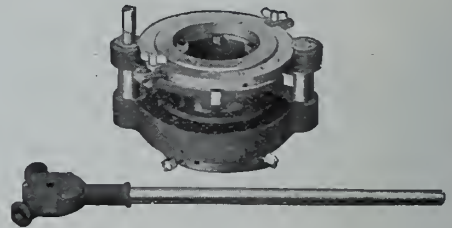
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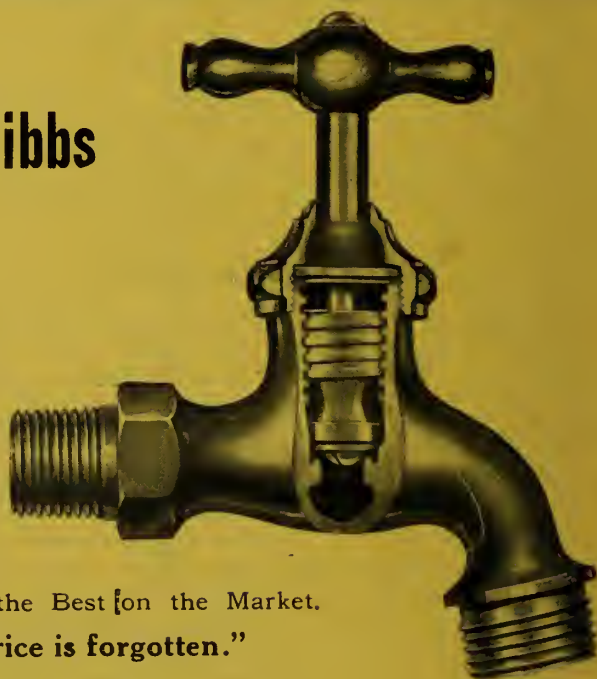
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No. 23



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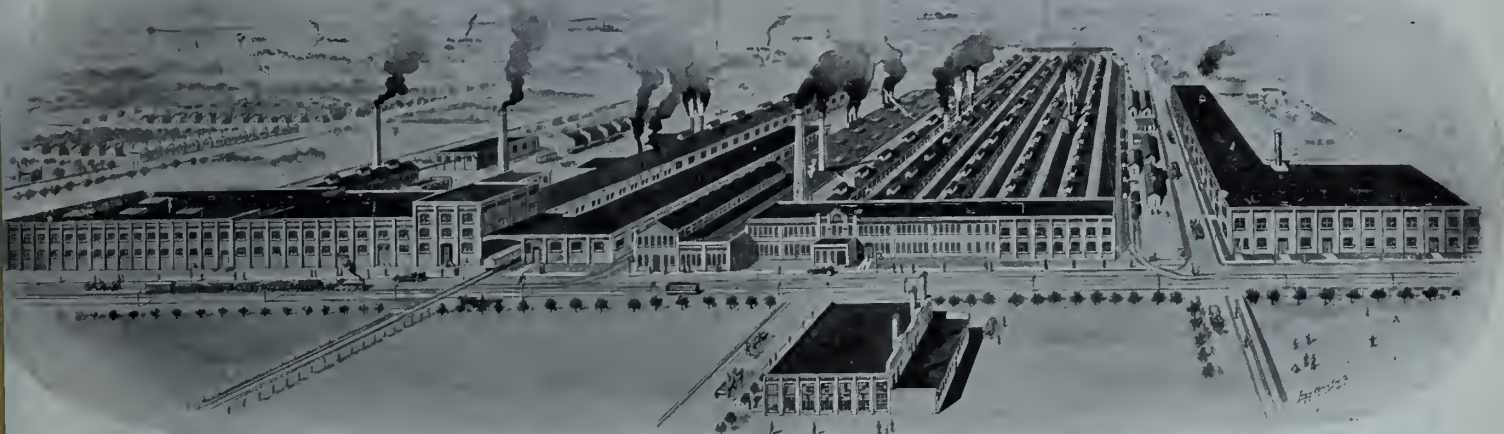
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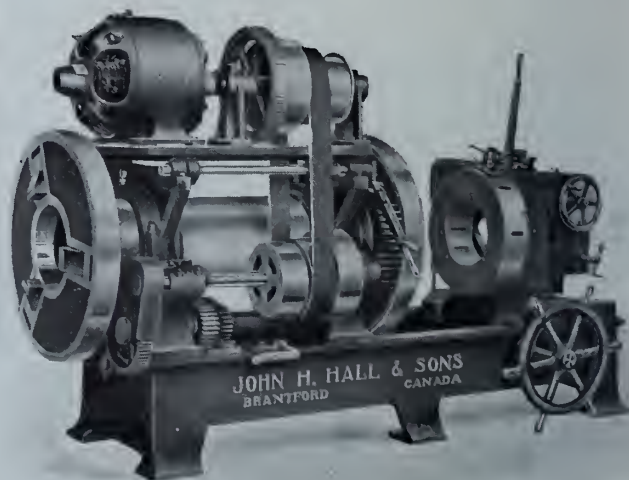
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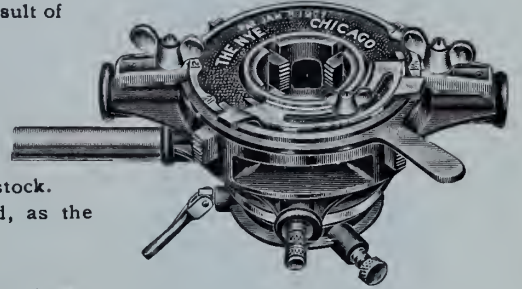
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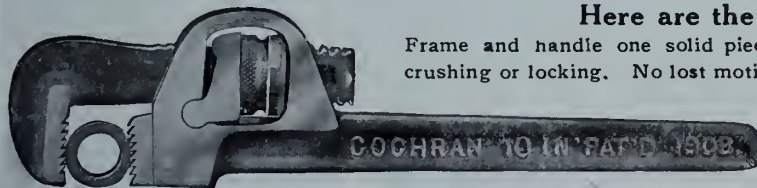


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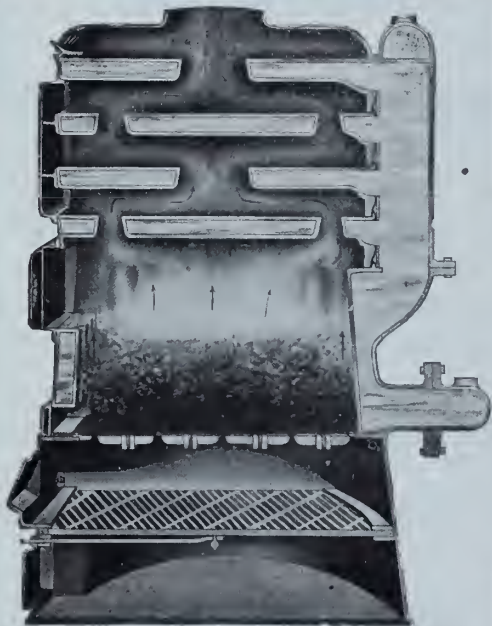
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TORONTO, DECEMBER 1, 1911

THE YEAR NOW drawing to a close has been a record one in some respects. Plumbing and heating manufacturers state that business has been, perhaps, larger than ever before.

Confidence in the Future. The same satisfaction applies to the prospects for the coming year. Manufacturers and supply men agree that there is every reason to believe that the present prosperity will continue throughout 1912. At any rate, there is nothing as yet to give rise to misapprehensions on that score and the manufacturers are preparing for the coming year with a full measure of confidence.

Although the Western crop has been more or less of an assured success, it becomes evident that heavy losses will be sustained in some sections. Travelers report that in some parts of North Alberta and Saskatchewan, the crops have been snowed in and may not be harvested, which would occasion a heavy loss. No contingency can detract, however, from the prosperity which will prevail in practically all parts of the West, as a result of the uniformity of good crops.

THE TROUBLES OF A MONTREAL Master Plumber, who followed one clause of a certain specification, and thereby necessarily violated another clause, should cause every man in the business to think. There is hardly a plumber who has not had trouble over specifications at one time or another. Most of these troubles, moreover, come from too great confidence in the skill of the architect who drew up the specifications. The master plumber takes it for granted that the architect knows his business. He therefore reads the specifications only to see how much he will have to allow for the various goods demanded, seldom scanning the various clauses for mistakes.

Yet it is evident that this should be done. The architect is not infallible. He is liable to make a slip, especially when changes are asked in the first draft of the requirements which he has prepared. He will make these alterations, but may forget to effect other changes, made necessary by the first.

Such mistakes, discovered before the work was undertaken, could be speedily rectified; discovered when the job is finished they prove a difficulty hard to surmount.

STUDY THE specifications. Know just what you are expected to do and avoid complications.

THE TIPPING system is one of the prime nuisances of the age. The traveling public is bled systematically and, although the demands made on this continent are not as insistent as in Europe, the amounts expected are much larger. Commercial travelers expend a small fortune in this way.

To Suppress Tipping Evil.

It has been estimated that traveling men in the United States pay out \$50,000,000 every year in tips to waiters, bell boys, porters, etc. One begins to realize the extent of the evil when that enormous total is brought to their attention. The real sufferers, of course, are the firms who pay the expenses of the traveling man. The cost of marketing goods nowadays is just fifty million dollars more than it should be on that one score alone.

A movement is now on foot to force hotel proprietors to stop the wholesale brigandage of their employees. The travelers threaten to establish sample room headquarters in every city and town and to control private rooming houses so that members of the traveling fraternity will be able to secure accommodation and service, without giving "backsheesh" to itchy-palmed employees. The threat is no idle one. Unless the hotelmen hire employees, who will receive pay for looking after the wants of guests instead of being put to the necessity of extorting tribute, the traveling men will resort to the drastic measures threatened.

A BUSINESS MAN WHO lets one side of his business earn him a little or nothing is a business man who it is not wise to emulate. He may be making money. Perhaps he is making a lot, but the fact remains that he is not making as much as he might.

Allowing the Store to Remain Idle.

He is not alive to his opportunities.

There are many master plumbers who are doing just this thing. They have a store but they sell nothing from it. They bear the expense of the establishment without reaping the profits.

Some men, who take large contracts, would not have the time to devote to retail trade. But there are others, men who are not working to the limit, who yet simply use their shops as store rooms, places in which to arrange for their jobs. They might make these establishments earn money by giving a little attention to them and making them attractive. Many people want goods which plumbers handle, from time to time. It is the man who shows these goods who gets this trade.

MEMBERS OF the trade in England are taking strong exception to statements made by Harold Begbie in his latest book, "Broken Earthenware." In a chapter headed "The Plumber," the author says that the "plumbing trade was the worst from the moral point of view; that there was no bigger set of thieves than those of the plumbing trade; that he did not know why it was, but plumbers appeared not to be able to help it." He would sooner have a burglar in the house than a plumber. Further, if these were "rum" things to say about the whole trade, they were nevertheless true.

A Libel on the Trade.

The Institute of Plumbers have decided to secure legal advice with a view to ascertaining if the author of these malicious statements cannot be proceeded against for libel. They are justly incensed but the legality of any action would be impaired by the fact that the book has been out for over three years now. No one connected with the craft, apparently, had noticed it before.

It is unfortunate that the plumbing craft has been made the butt of the cartoonist and comic skit writers; but, as this position is by no means unique, being shared with the Jew, the suffragette, the policeman, the mother-in-law and countless other types and classes, it should be accepted with as good grace as can be mustered. But there is a limit; and Mr. Harold Begbie seems to have exceeded it in his uncalled for and unprecedented arraignment of an eminently respectable and high class trade.

UNDOUBTEDLY THE CANADIAN SOCIETY of Sanitary and Heating Engineers is taking a wise step in compiling a directory of the master plumbers, the plumbing supply houses, and the architects of Canada. The book will tend to bring those interested in this important phase of business more closely together. It will result in financial gains to many. But the direct benefits will not be all. The directory, when completed, will be of great assistance in forming local associations. Now the provincial vice-presidents are greatly handicapped. They cannot spend the time or the money in visiting many of the places in which they believe local associations should be started. They do not know to whom they may write. Perhaps they know of some plumber, but he may be a man who takes little interest in such things. There are still men of that type in the land.

Directory Will Help in Work of Organization.

But with the new directory in hand the vice-president or the officers of the National Society will never be at loss for a man who will reply to whatever question they may wish to ask. Probably in the plumbers of each town they will recognize the name of a man whom they know to be energetic. If not, they will be able to write letters to two or three. As a result, the work of the society will be advanced, likewise the interests of the master plumber, for the interests of the master plumbers the country over are closely connected with the society.

In Montreal a movement to so change the name of the local association that it would refer to sanitary and heating engineers, instead of plumbers, has been dropped because this would involve the expenditure of a goodly sum of money. The position in which the Montreal local finds itself illustrates the need of other associations starting right.

IN THE ANNUAL REPORT of the Royal Edward Institute, read last week in Montreal, is a section which clearly indicates that there is great need of educational work being carried on throughout the Province of Quebec

Need of Better Ventilation.

—work which can be done perhaps as well by the master plumber as by anyone else. After speaking of the great amount of tuberculosis which exists in the province, and especially among the French-Canadians, the report says:

"The reason for this state of things is the overheating of houses in winter, and the preference for breathing a vitiated atmosphere to permitting the proper ventilation of their houses. Fresh air, in fact, is carefully excluded by hermetically-sealed doors and windows."

The plumber comes closely in touch with this class of people. When installing new work, or when fixing some break, he has the ear of the householder. Then he should emphasize the use of fresh air. He will be performing a service to mankind by so doing; and he will be doing himself a good turn, for bad plumbing is, of course, blamed for much of the sickness that occurs. More diseases than tuberculosis are aggravated by faulty ventilation. The plumber owes it to himself, therefore, to make people see the advisability of opening a window, to replace with fresh air that which has become vitiated and contaminating.

IN THIS ISSUE reference will be noticed to the necessity of rigid inspection in the larger cities. There are always enough house owners, anxious to get work done at the lowest price possible, to support the plumber, who is prepared to do work of that

Inspection Should be Made Rigid.

kind. Glaring examples of unsanitary work can be found in every city. The trouble seems to be that the inspectors are kept so busy that they cannot catch everything and jobs of this kind frequently pass unnoticed. The chief difficulty seems to be, however, with cheap work done years ago and never attended to since. It would pay every city to conduct a sanitary census, during which every building would be inspected and reported upon. A wonderful improvement in conditions would be the inevitable result.

A GOOD CHRISTMAS present for the members of your staff would be a year's subscription to Plumber and Steamfitter.

A PROSPEROUS year is drawing to a close. Members of the trade have little room for complaint with the treatment meted out by 1911.

AMERICAN commercial travelers pay out fifty million dollars every year in tips. Dick Turpin and Claude Duval, notorious knights of the highway, were only amateurs at the hold-up game after all.

SAMUEL LIDSKY, accused in Montreal of pointing a revolver at a customer, was honorably acquitted by Judge Bazin, who declared he would have done the same thing under similar circumstances. Surely "A Daniel has come to judgment." How many plumbers would like to adopt such wild western methods toward a few of their customers?

Aims and Objects of the Ontario Society

President Legrow Outlines What is Ahead of the Society and the Work That the Officers are Undertaking—The Importance of the Examination Committee—First Meeting of Directors Held.

Toronto, Nov. 17, 1911.

THE first meeting of the directors of the Ontario Society of Domestic Sanitary and Heating Engineers, was held on November 16. It was decided to acquaint the trade generally of what steps had been decided upon, through the columns of Plumber and Steamfitter.

The procuring of certificates is being thoroughly canvassed. We desire to have a certificate which will have artistic merit, as well as being of much importance to those qualified to receive them.

It was decided to proceed immediately with the printing of the constitution and by-laws in small pocketbook form, done neatly and attractively.

The secretary is corresponding with the chairmen of all committees, and impressing upon them the necessity of organizing their committees. This necessity is particularly pressing in the cases of the chairman of the examination committee, J. Eggett, of London, and the chairman of the educational committee, H. Hicks, Toronto. We must understand that, if we are to be successful in compiling a proper set of examining papers, help and suggestions from men all over Ontario must be secured. Send to Mr. Eggett, or to any of the directors at Toronto, suggestions and copies of your local by-laws, remembering that this society will stand for ability and qualifications, and that every person interested will, in a few years, feel the importance of their membership in this society.

We must not forget that our society must be built slowly and surely; that we must grasp the significance of our charter and its responsibilities. We have not received this charter to put any obstruction, or selfish consideration in the pathway of any man becoming a member of this society; we would not even object to our personal opponents and egotistical contemporaries, the engineers, associating with us, even though they may be the salt of the earth, and though they may have a very great amount of self-importance. But we must recognize that membership in the society carries with it the obligation of doing, and being, just what the name implies. In this age, sanitation has, and is becoming, of national importance. The sanitary awakening is becoming comprehensive. There is a great difference between the modern waterworks system and its power to serve the people scientifically, and in the sanitation,

so called, of primitive man with his system of wells and cisterns.

Cholera, that dread disease of filth and uncleanness, has been conquered. Typhoid is in its last death gasp; thanks to the men who have spent their lives discovering its causes and its cure. While many important health acts are being formed, should we, who are vitally interested, and who are doing our share by installing sanitary appliances—should we be satisfied to remain "Bill Dobbs the plumber?" Can we not grasp the importance of the business we are engaged in?

Some of us may not have had the opportunity of receiving a theoretical training. (We are more sorry than any one else.) Every person should be conscious of their inability to do that which they know they are not fitted for; but

they should not despair of ever attaining to that ability. One does not propose that, because one was born a plumber, one is going to die a plumber. We must progress or fall behind. Society demands trained men in all lines of thought and mechanics; and, if this new Society of Domestic Sanitary and Heating Engineers, can give to Ontario a better class of trained men in theoretical and practical sanitation, then shall we be of some help in advancing the standard of modern life. We desire to increase the ability of sanitary and heating engineers, to give to the public that which we desire for ourselves—an educated class of men engaged in the business of sanitation. Then will we fill a proper niche in the nation's welfare.

LEWIS LEGROW.

Progressive Legislation Advocated in Various Sections

Technical Classes in Sanitation to be Held in Calgary—Civic Board of Plumbing May be Appointed in Vancouver—Toronto Journeymen Want Inspectors to Pass Examinations.

CALGARY, Nov. 15.—The technical director of local schools has been authorized by the school board to arrange for classes in sanitation and heating. This step has been advocated for some time, and it is felt that splendid results will be obtained.

The joint committee appointed by the Calgary Association of Sanitary and Heating Engineers and the local union of plumbers, gasfitters, steamfitters and steamfitters' helpers, to arouse the interest of the men and boys engaged in the plumbing and heating trades in this city in the technical classes that are being formed, have reason to feel self-congratulatory in the results obtained.

Not only have they aroused enthusiasm among the men concerned, but they have also been successful in their application to the school board to have a course in plumbing and sanitation included in the programme of technical instruction. In a growing country or community the value of proper sanitation and sanitary appliances are incalculable, the record of all municipalities showing that in all cases the community having the best sanitary arrangements, is the community that has the lowest death rate.

In the starting of a class along these

lines in the technical education programme of the school board, both the master plumbers and journeymen of Calgary feel that a distinct step forward has been taken, one that in time will show great results, not only in Calgary but throughout the West.

A circular of information with regard to these new classes will be issued as soon as possible. In the meantime, the Calgary Association of Sanitary and Heating Engineers, will be glad to receive applications for the post of instructor for this course, such applications to be sent to the offices of the association, 27-28 Mackie Block, from whence they will be submitted to the consideration of the technical committee of the Calgary School Board.

A Civic Board.

Vancouver, Nov. 20.—It is announced that the Provincial Government has refused to grant the application from this city that a provincial board of plumbing be established. Medical Health Officer Underhill accordingly will attempt to have a city board of plumbing created.

At present, he states, it is extremely difficult to watch the installation of plumbing, and in outside districts, all

sorts of inferior appliances are installed. This is also the case in municipalities surrounding the city, says the medical health officer, and it was with a view to preventing it and having the plumbing of Greater Vancouver on one basis, that the creation of a provincial board of examination was urged.

The matter will be laid before the civic building and health committees shortly. A clause covering the creation of a civic board has been prepared, as an amendment to the new plumbing by-

law now in course of preparation, but it has not yet been submitted.

WANT EXAMINATIONS.

Toronto, Nov. 14.—W. J. Storey, business agent of the Plumbers' Union, asked the controllers to-day to have civic sanitary inspectors pass a plumbing examination. He contended that master plumbers, with practical plumbing knowledge might be appointed. Dr. Hastings, M.H.O., will report on the proposal.

The intention is to classify the book in a number of ways, by provinces, by lines of goods handled, etc. It is expected the directory will be of great use to the master plumbers.

STREET BECAME SEWER.

South Vancouver, Nov. 22.—A practical remedy for the abatement of the nuisance existing on the boulevard and caused by exposed septic tank rock pits impregnated with the sewage from tanks in the vicinity, which distributed filth upon the main highway, was most earnestly sought by the health committee at their meeting yesterday afternoon. The question arose out of the report of Mr. Thurston, the plumbing inspector, who stated that the rock pits had been exposed as the result of the cut which had been made in making the grade upon the boulevard.

Councillor Dickinson gave a very realistic description of his own personal knowledge of the unsanitary locality. It was finally decided that a tile drain would be installed on the lot line of this street to carry the sewage to a natural waterway on Agnes street, and that the work should be carried out under the supervision of the plumbing inspector.

A JOLLY CROWD.

A number of photographs taken at the Turn City convention this summer have come to hand. The one reproduced was taken by Tom Maxwell, of Toronto, on the boat on the return trip. All members of the party are easily recognizable.

Propose Officers for the Coming Year

Montreal Association Takes Steps to Make Sure of Good Officials—Decide Not to Change Name to Sanitary and Heating Engineers—The Alteration Would Mean an Expense—Association is Now Doing Fine Work—No Need of a Change is Apparent.

Montreal, Nov. 28.—All is in readiness for the election of officers of the Montreal Plumbers' Association, which takes place in December. The committee appointed to nominate men for the various positions has about completed its work. Its members have selected men whom they consider well fitted for the various positions, and the names of these they will submit at the next regular meeting. It is likely that they will stand as now proposed.

Those suggested are:—President, J. R. Meadowcroft; vice-president, Jos. Thibeault; second vice-president, R. J. Macauley; secretary, Arthur Gardner; assistant secretary, W. A. Stanley; chairman sanitary committee, P. C. Ogilvy; chairman arbitration committee, W. R. J. Hughes; chairman legislation committee, Jos. Laurier; chairman apprenticeship committee, Jas. Griffin; representative to Builders' Exchange, J. R. Meadowcroft; audit committee, Jas. J. E. Walsh, John Watson, Wilfrid David.

Jas. Ballantyne, as retiring president, will, of course, have a seat upon the executive.

Consider Change in Name.

The local association has considered the advisability of a change in name, so that it will refer to sanitary and heating engineers, instead of to plumbers. But no change is to be made for the time being. The new name, adopted at the last gathering of the National Society, is considered much more fitting than that now used here, but the alteration would mean considerable trouble, and the investment of no small sum. The local association is incorporated. The incorporation cost in the neighborhood of \$300. To change the name, it is felt, would be nearly as costly.

Ever since Shakespeare wrote "What's in a name?" people have been asserting that there is a whole lot in one. Undoubtedly, this is true, yet it is doubtful if a change at the cost of \$300 would

be good business. The local association is now doing splendid work. It's effectiveness could hardly be improved, therefore, say the members with some reason, why make a change?

DIRECTORY READY FOR PRINTING

Montreal, Nov. 29.—John Watson, secretary of the Canadian Society of Sanitary and Heating Engineers, has been working hard getting together the names of supply houses, master plumbers, and architects, from all parts of Canada. The provincial vice-presidents of the society have been giving him good assistance, and Mr. Watson believes he will have the names ready for printing by the time the convention is held in Calgary next July.



A jolly group of sanitary and heating engineers.

Some Pointers on Exact Plumbing Designs

An Address Delivered by John D. Small, Mechanical Engineer, Chicago, Before the Fifth Annual Meeting of the American Society of Inspectors of Plumbing and Sanitary Engineers.

TWENTY years ago the amount of plumbing designed prior to commencing work on building was so small it may be said that all work was laid out on the building by the successful bidder who acted in the dual capacity of sanitary engineer and contractor, of necessity assuming the former.

veloped. According to the axiom, "An ounce of prevention is worth a pound of cure."

The result is that the plumber has an absolute basis on which to figure and is on an equal footing with his competitor when he receives a set of plumbing diagrams and specifications clearly setting

Among the many improvements most important, perhaps, is the arrangement of the pipes to best adapt them to the structural conditions, as well as serve their various purposes. The illustrations are reproduced from the plumbing plans of the People's Gas Light & Coke Co.'s building, Chicago, designed by the

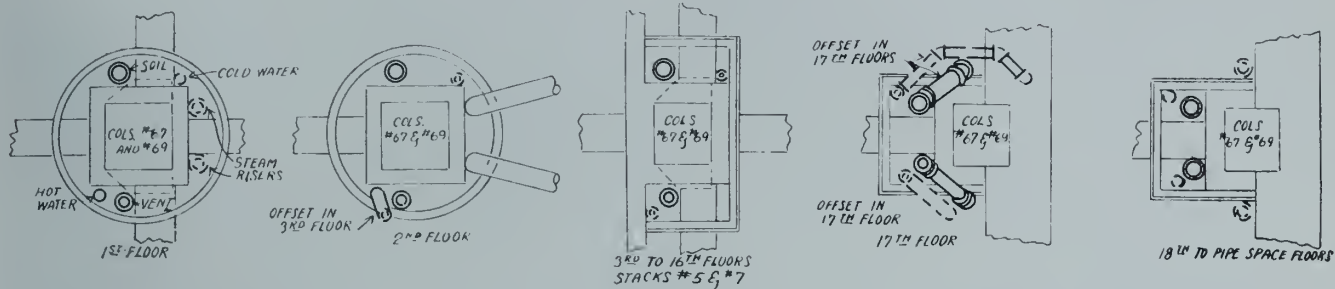


Fig. 1.

As the height of buildings increased and the complications arose in meeting the requirements demanded by the more rigid plumbing ordinances enacted from time to time, the practical plumber had his hands full to install the work and was only too willing to leave the de-

forth the entire piping system of drainage, ventilation of drainage, hot and cold water pipes, with all sizes indicated on same, and specifications describing in detail the various features of the design, leaving nothing indefinite.

The sanitary inspectors also appreciate

writer for D. H. Burnham & Co., architects. All plumbing diagrams from this office are now accompanied by a set of similar details, showing location of stacks with relation to structural columns, beams and enclosures.

Fig. 1 shows details of stacks Nos. 5

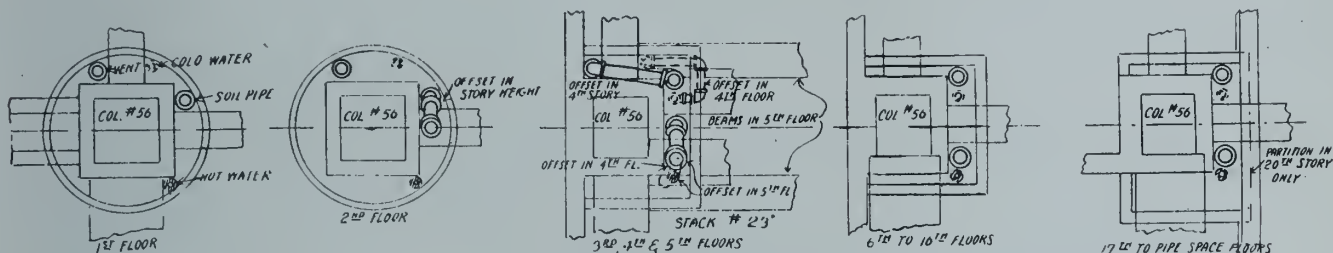


Fig. 2.

sign of the system to those who had made a study of sanitation and its relation to architectural design.

To-day, the sanitary engineer is kept busy planning and specifying the work to comply with the numerous requirements of rules and regulations govern-

complete and exact plumbing design as it enables them to better detect irregularities when they examine the plans submitted for approval before commencing work. The engineers and inspectors can accomplish great things in the line of healthful and hygienic de-

and 7 passing through circular enclosures of columns in first and second story, continuing through third to sixteenth corridor partition and offsetting at 17th floor to face of column.

Fig. 2 shows stack 28 passing through square enclosure around columns in first

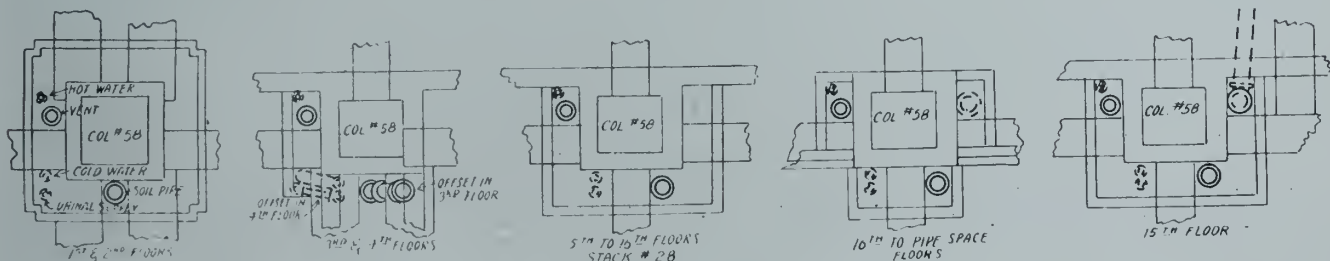


Fig. 3.

ing such installations and to avoid difficulties arising during erection of work due to lack of provision for concealed piping, proper space, etc., while the general building plans are being de-

sign by working together, and the engineer has a duty in educating the architect with whom he is working in the ethics of sanitation to accomplish the best results.

and second storeys. All second floor soil pipe is offset to get around beam, fourth to sixteenth floor layout being typical. This illustration also shows the typical connection to soil and waste risers

throughout the building at all floors by the use of 45 degree fittings, the branch being full size of the risers and bushed to the size of run to fixtures. This provision permits of any fixture being connected to any stack that would not be prohibited by the ordinance. It also insures better drainage from the branch on account of the pitch.

Fig. 4 shows stack 32 passing through square column enclosure in first and sec-

ond storeys, in third and fourth continued at side of column, and fifth to tenth on corridor partition, offsetting at seventeenth floor to face of column. These details are a guide to the plumber and are the direct result of former trouble experienced in execution of work with nothing but $\frac{1}{8}$ or $\frac{1}{4}$ scale plans showing only small circles where pipes would come, the plumber only realizing that he could not get through when he ran afoul of a beam, and in many cases

had to pull down his work without being in a position to charge for same. The sanitary engineer has the power and means to avoid many of the troubles and complications arising in the field by a more careful and exact plumbing design with which to provide the plumber, and by so doing, he will have the satisfaction of knowing that he has kept many a journeyman from "taking his name in vain," as well as saving

In a large house, a large radiator does not look out of place. It does not crowd things. It does not seem to be continually in the way. But in the small residence, in the flat, or the apartment, the smaller the radiator can be made the greater will be the comfort of the residents. The rooms are not large, and if those living in them can get a proper amount of heat without having a large radiation, they will be perfectly pleased.

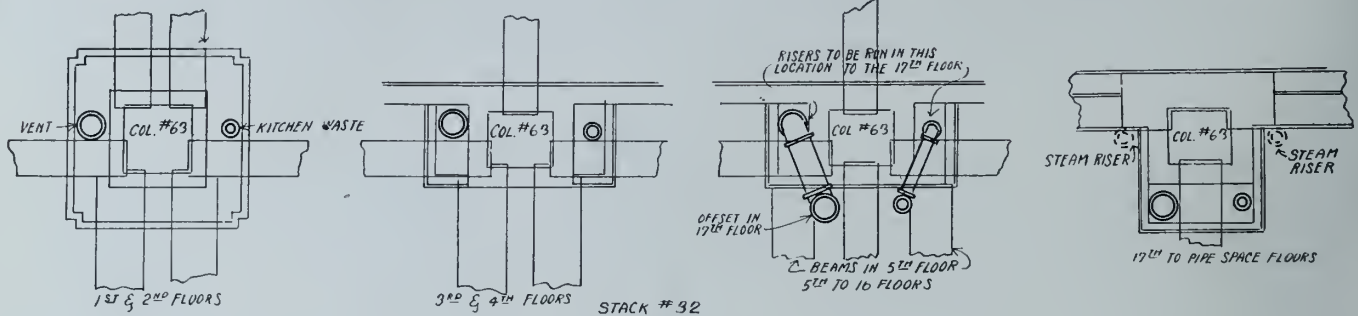


Fig. 4.

himself a great deal of annoyance by being called on the job to decide what to do to straighten out the trouble, which could have been avoided by a little forethought. As an old-experienced architect once said, to a young draughtsman: "You can't put too many notes on your plans, providing they are right." Likewise, details are a good thing on plumbing plans, providing they are right.

ond storeys, in third and fourth continued at side of column, and fifth to tenth on corridor partition, offsetting at seventeenth floor to face of column. These details are a guide to the plumber and are the direct result of former trouble experienced in execution of work with nothing but $\frac{1}{8}$ or $\frac{1}{4}$ scale plans showing only small circles where pipes would come, the plumber only realizing that he could not get through when he ran afoul of a beam, and in many cases

Small Sized Radiators in Great Demand

Latest Fashion is to Have Coils Placed Under the Window—Architects are Regularly Specifying Low-Standing Patterns—So Many Were Ordered That the Supply Completely Ran Out—A Sensible Demand Which Manufacturers Will Prepare to Meet.

There have always been people who set the fashion and people who followed it. Likely there always will be, but it is a pretty safe conjecture that there will be many more who follow than who devise something new.

Yet fashion is a great force in modern times, and there is really no use quarrelling with it. The makers of radiators, therefore, are doing well to recognize the changed demand for their product. What is wanted now is the low radiator—the radiator that can be placed under a window, and which may be completely hidden, if so desired, by a window seat.

Architects Introduced Style.

Architects, probably, have been the ones who made this style fashionable. They introduced it any way. The radiator itself did the rest. It appealed to the people generally, as compact, hand-

some rather than ugly—in short, altogether to be desired.

And so all summer this style of coiling has been in demand. The manufacturers were unprepared. They had a fair reserve supply of radiators, but only what had formerly been a just proportion of the low style. This year their reserve in that size was quickly exhausted. They read the signs of the times and got busy making more, but all summer long the orders have been piling higher and higher. The demand cannot be met.

A Sensible Style.

There are fashions which many find hard to tolerate—the hobble skirt, the dangerous hat pin—but this radiator fad is different. It is easily understood. It is sensible, especially for the larger cities.

Prepare to Meet Demand.

So the architects are calling for the small coils. Sometimes they have these placed under a window seat. The source of heat then does not show at all. It is a good arrangement.

But even if the coils are not covered, a position under the window is considered good. There is no desire to place furniture close against the glass, while a radiator in any other part of a room may seriously interfere with the arrangement of the chairs and tables.

This is one of those sensible fads—if fad it may properly be called—which seems destined to become more and more popular. Such is the way the manufacturers are regarding it, and through the winter they intend to produce many coils in this shape, so that the demand of next summer may not find them unprepared as they were this summer.

A PLANT OPENED.

The Canadian Gasket Co., have opened a plant in the Review Building, Bridgeburg. The firm will manufacture a patented corrugated gasket, which absolutely prevents leakage from a steam-pipe or boiler.

A NEW SHOP.

A shop is to be erected on Adelaide St. W., Toronto, by the Gurney Foundry Co. It will be of solid brick and structural steel, with a brick foundation, and tar and gravel roof. It will cost \$9,000.

TO VOTE ON BY-LAW.

The ratepayers of Brampton, Ont., will vote on a by-law to raise the sum of \$43,000 by way of loan to the Pease Foundry Co.

Discrepancy in Specifications Causes Trouble

In Same Clause Two Things Were Demanded, Each One of Which Excluded the Possibility of the Other—Montreal Plumber Did Not Notice This, and Difficulties Have Resulted—The Trouble-making Contradiction was the Result of Amendments Made in the Original Specifications.

Montreal, Nov. 28.—At the present time, a Westmount master plumber, an architect, a specialty house, and the City of Westmount, are having difficulties of a nature which should be a warning to every heating engineer in Canada. The master plumber in this case is not likely to lose much financially, but he is being bothered a great deal, and the \$2,100, which is due him for establishing the heating system in question, will likely be held back for some time.

The whole trouble arose over a specification in which corrections were made. 'Tis ever thus. The number of difficulties coming about through revisions in the original specification could hardly be numbered. This time, the alterations resulted in a mistake. Someone had blundered. Two things were requested, each one of which made the other impossible.

The Cause of the Trouble

But the clause in the specification for this firehall, which brought about the trouble, had best be stated. It reads:

"One cast iron section boiler made by _____, plate Nos. 407, having a guaranteed capacity of not less than 2,900 square feet of direct radiation when operated in connection with the _____ modulation system. It is to have a grate area of not less than 14 square feet."

Looks well, doesn't it? It would be all right too, if boilers of the type specified were made with grates of the measurements specified. But the sad truth is, that they are not. So now that the boiler is installed, and the radiation all in place, the master plumber finds that his work is not satisfactory to the inspector of the Modulation Co., which guaranteed the system.

Two Viewpoints.

"Why is not a 14-foot grate here?" asked the inspector.

"There is not a 14-foot grate to be had with the boiler specified. I went by the number of the boiler."

"We don't care about the pattern of the boiler. We care for the size of the grate," answered the inspector.

So the trouble was discovered. Since then, the master plumber has been trying to learn what has gone wrong, and after many calls he has found out this much. The firm putting in the Modulation system, apparently, ordered a larger grate after the specifications had been drawn up. The architect made this change, increasing the size from 13 to 14 feet. But he must have forgotten to

change the pattern of the boiler to suit. So the plumber, not noticing the discrepancy, secured the style of boiler demanded, and went ahead with his work.

All are at a Loss.

Now, all the parties interested seem at a loss what to do. The firm which sold the corporation the Modulation system, does not want to guarantee its effectiveness when the grate is smaller than that they had ordered. The City of Westmount does not want to accept the work without that guarantee, though there seems little doubt that the 13-foot grate is big enough for the needs of the firehall. The master plumber has invested his money for that boiler. To get one with a 14-foot grate, he would have to pay \$70 more. Indeed, this sum would not be sufficient, if the supply house from which he got the original boiler had not stated its willingness to make the exchange, in order to help him out. But this \$70 difference does not account for the time needed to make a change in the system, if this is demanded. Moreover, during all this delay the master plumber is without his money, to 85 per cent. of which he was entitled as soon as the work was finished.

Last of All, the Moral.

It is a nasty position—nasty for the corporation, nasty for the firm which guaranteed their system, nasty for the architect, who prepared the specification, nasty, especially nasty for the plumber, who is going without his money for the time being. But it has a moral, has this tale, and the moral is, that specifications should be scrutinized carefully, especially should attention be given the clauses which have been amended.

SHOULD THE CESSPOOL BE VENTED?

Editor Plumber and Steamfitter.—Should the cesspool on a job be vented and if so what would be the reason?
Nov. 20. J. B. Speck.

The cesspool should certainly be vented; the reason for so doing being that various gasses may not be generated there which will produce pressure. Why use the cesspool at all? Why do you not get a few books and post up on the disposal of sewage by other more modern methods than the antiquated cesspool which is a nuisance and a menace to all concerned? We should advise you to look up some of the back numbers of

this paper in which various articles have been published in relation to this matter and we believe that you will avoid installing any more cesspools.—D.S.H.

DRAINING THE BOILER.

Editor Plumber and Steamfitter.—When you want to drain a range boiler, you can cut off the water supply and then open the faucet that is at the bottom of the boiler. The water don't run much and it is then necessary to open a faucet at the sink or somewhere else before the water will run off. We know this is so, but why? Please explain.
Calgary, Nov. 15. Information.

When the water in the boiler has to work against the atmospheric pressure as in the case of where the drain cock only is open, its weight is not enough to overcome said atmospheric pressure. The opening of some faucet that will admit the pressure to the top of the boiler starts it to emptying.—D.C.H.

TO BUILD WAREHOUSE.

An important deal has been consummated in Lethbridge, whereby Canada Metals, Ltd., secure a site near their present premises in the wholesale district, to be used for the erection of a new warehouse in the spring.

SARNIA IS INTERESTED.

Sarnia may be selected for the establishment of the Canadian branch of the Mueller Manufacturing Co. The company agrees to spend \$100,000 in lands, buildings and machinery there and to employ from 75 to 150 hands, in return for certain concessions.

A NEW FACTORY.

The Canada Metal Co., Toronto, are building a new branch factory on Chambers Street, Winnipeg, and it is expected that the plant will be ready for occupancy by the first of the year. W. D. Harris, Jr., is now in Winnipeg, looking after the work of construction.

A full line of plumbers' supplies will be manufactured.

Piping Scarce at Present.

Montreal, Nov. 29.—Piping is hard to get here. Some dealers have good supplies on hand, but their number is few. One man declares that he has been all over the town to get inch-and-a-half pipe, and has been quite unable to secure all he wanted. The manufacturing are behind just now. It is said, their supply will be equal to the demand after navigation closes, and the big orders from the West are filled. It is to be hoped this is so, otherwise, the situation here may become serious.



The Question Box



Subscribers are Urged to Send Questions to be Answered, or to Comment on Letters Published. Descriptions of Jobs Done or Shop Kinks are Also Invited.

CONNECTING PIPES LEAK BADLY.

Editor Plumber and Steamfitter.—In the enclosed sketch the joints at the points P, O, and S, have leaked badly notwithstanding the fact that they have been fixed over several times in about all the ways that are known to our craft. I have put in new pipes, used lead (both white and in calking) and maybe for a few days the joints will hold and then it is a call from the householder who gets hot and claims that I have not done a good job. If there are any suggestions that you can make, I should be very thankful to get them. There is a check valve on the supply at point Z.

Toronto, Nov. 24. C. G. Mastars.

From the layout given, we believe that the correspondent has attended to the making up of the connections between the boiler and the water back as properly as may be and perhaps more so

which is totally unnecessary on this job. If the fire in the stove is very hot, the check valve will prevent the water along the supply line acting like a cushion and the pressure on the boiler and connections will be greatly increased. We regard it as a fortunate thing that the joints did leak and relieve the pressure or otherwise there might have been an explosion in that kitchen. Remove the check valve and we believe that there will be no further trouble from leaks if you take as much care in installing the work as you mention.—D.C.H.

N.B.—Question and answer for drawing No. 1, Nov. 15, 1911.

METHOD OF INSTALLING DRIP.

Editor Plumber and Steamfitter.—I am sending you a sketch of the manner in which a drip is taken off on a main steam pipe on a job that I am going to

point A, there might be a slight collection of water. We doubt if it ever would give any trouble other than a slight clicking noise as the steam passed along, provided that the pipe between A

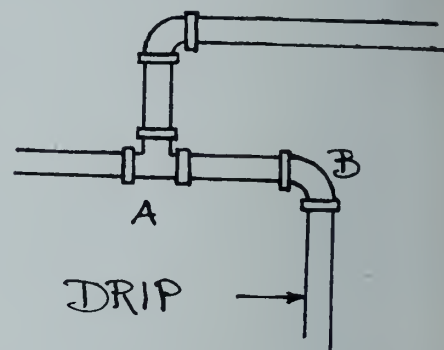


Fig. 1.

and B was not trapped which would hardly be apt to happen on so short a run.

However, there is a more practical manner which will avoid any such chance and we show it in Fig. 2. With such a connection the condensation will be

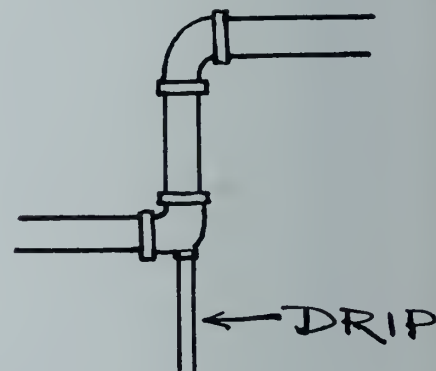


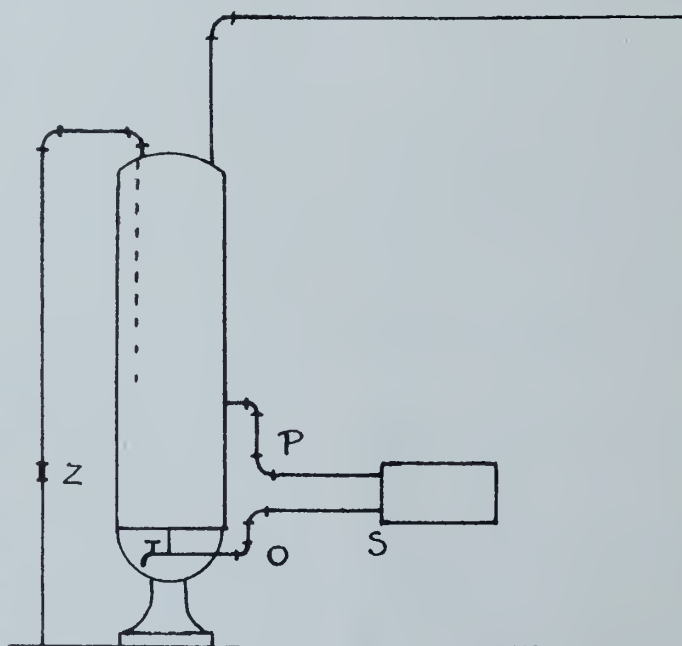
Fig. 2.

taken care of, and any chance of anything going wrong avoided.—D.C.H.

N.B.—Questions and answers for drawings Nos. 2 and 3, Nov. 15, 1911.

RETURN BEND FOR EXPANSION.

Editor Plumber and Steamfitter.—I am showing you a method of providing for the expansion on a steam main that I have found on a job that I was once called upon to inspect. This is shown as if one was looking at the work directly from above, enough pitch being given to the work so that the pipe



than the general run of work. If he has selected the pipe and fittings, seen to it that the threads are all right, there ought not to be any leaks and the cause might be looked for from some other reason.

We believe that the cause will be found at point Z or the check valve,

repair. It seems to me that it could be bettered and would be glad to have you suggest some manner in which this could be done.

Montreal, Nov. 20. P. O'Rielly.

In the drawing given, as shown in Fig. 1, unless the pipes were well reamed and an eccentric fitting used at the

would clear itself of condensation. Both joints on the return bend always leaked and were calked any number of times without success. I remedied the matter by making a swing at point M which relieved the strain there and after that there were no more leaks. I suppose that the fitter, who first put in the work, thought that he was reducing ex-

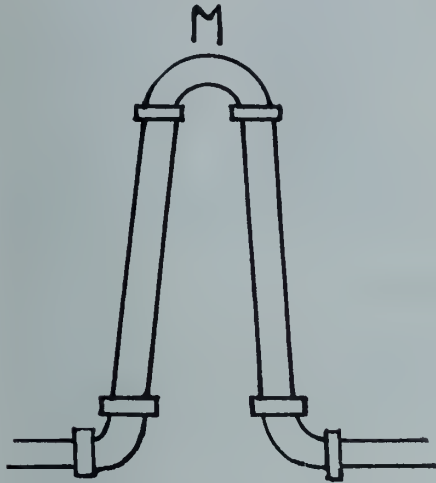


Fig. 3.

penses by making use of the return bend, but it did not turn out that way. The first cost might have been less, but it did not get the results, and cost more for repairs than the whole thing was worth at that point. Some nipples and a few ells soon made matters all right. Sometimes it doesn't pay to skimp the job.

C. S. Weeks.

N.B.—Question and answer for drawing No. 4, Nov. 15, 1911.

VENTING THE CLOSET BOWL.

Editor Plumber and Steamfitter.—Would you consider it a good practice to run a vent from the closet bowl? I notice, that in some cases, where I have observed it done that it did not seem to accomplish the purposes for which it was intended. Are there other ways of removing the odors?

Winnipeg, Nov. 19. S. J. McVickers.

You seem to have partly answered this question for yourself. If the rooms you visited contained impure air or bad odors either the vent did not do what was expected of it or some of the sewer odors worked in somewhere. The way the odors are sometimes removed is by use of patented seat vents which are for sale by various firms. These vents can be attached to most any kind of a closet seat and an independent pipe run, if necessary, to remove the odors. It is said that these appliances have been very successful in accomplishing the purpose for which they are intended.—D.C.H.

HOW THE SPRINKLER HEAD WORKS.

Editor Plumber and Steamfitter.—Having never installed any of the apparatus but seen them in some of the stores, I wish that you would tell me how the sprinkler heads work when a fire starts in the building. How does the water get out of the heads?

A Reader.

Various kinds of sprinkler heads are used to-day, but the principle on which they work is pretty much the same. The valve in the sprinkler is so held in place that when the heat reaches the place, an arrangement of solder melts, the valve opens and the water is released. The solder melts at different temperatures anywhere from 165 up to 360 degrees, different fusing points being required as the sprinkler heads are installed in different places having higher or lower temperatures. Stores or boiler rooms being an example covering point just mentioned.—D.C.H.

WHAT WOULD YOU DO?

Editor Plumber and Steamfitter.—If you had a pipe split unexpectedly and you were a long ways off from the shop just what would you do? The water pipe located in the kitchen and the water a-flying all over everything?

"Questioner."

It would be a time for a few lively moves in that locality, and such a situation but shows that it is a mighty good plan to have a few odd cents invested in "stops" placed at points of advantage whereby the lines can be controlled. None being available, we should make a fast play to get to the stop and waste and close it. If the stop and waste stuck, we should smash into the pipe and let the water come into the cellar until we could plug the pipe. There would not be anything gained by attempting to wind the pipe in the kitchen for you could not do any kind of a job and while you were doing it you might cut it off at the s & w in cellar. With the water stopped, proper repairs could then be made.—D.C.H.

A TEMPORARY JOINT.

Editor Plumber and Steamfitter.—Please tell me how temporary repairs can be made on a water pipe when the split is quite short and it might be necessary to leave the joint for a few hours.

St. John's, Nov. 19. J. G. B.

Cut off the water while making the repairs. It might not be strictly necessary but it would be better. Find some putty and work it up until it is quite pliable but not too much so. A piece of

strong cloth is the next article and likewise some strong twine or cord. Then wipe the putty all around the pipe after which you can wind the cloth over the putty holding it in place. The string comes next but should be tied at the ends of the joint and then wound inward towards the centre. If this is not done the putty might be forced out at the edges of the joint. Put on with care a joint of this kind will stand the pressure for several hours, but is not recommended only in case of an emergency.—D.C.H.

A TELL-TALE PIPE.

Editor Plumber and Steamfitter.—Will you kindly tell me in the next issue of the paper just what a tell-tale pipe is and where it is used?

Vancouver, Nov. 13.

S. H. L.

A tell-tale pipe is generally used on plumbing jobs that are fed from a storage tank located, presumably, in the attic. It is a small pipe, the upper end of which is placed within a very few inches of the top of the tank, while the other end drips into the sink, in the kitchen, or some place where it can be readily observed as the tank in the attic is being filled. Now when the water in the tank reaches the upper end of the tell-tale pipe it flows into same and, flowing out of the bottom end shows the party filling the tank that enough water has been admitted to said tank.—D.C.H.

TOO MUCH HOT WATER.

Editor Plumber and Steamfitter.—A job that I have to remedy is a case of where there is too much hot water, or rather it gets too hot. How can I fix this to the best advantage to the owner?

Calgary, Nov. 13.

"R. R."

There are several methods by which you can accomplish the result desired. You can reduce the heating efficiency of the water front. This can be done by plastering it over with fire clay. Common clay, ashes and salt will sometimes give a mixture that will answer. You can install a larger range boiler in the place of the one now in use. You might run the piping differently, but the latter course is not advised as the others are more to the point. You can also cause gladness to come to the owner's heart by adding two or three radiators to the job and heating a few rooms in case that he is using stoves. We believe that the latter course would be the best provided he is shy on heat. Different illustrations have been given in this paper from time to time of the manner in which radiators could be attached, practically, to plumbing jobs.—D.C.H.

Instantaneous Heaters are Good Winter Sellers

These Have Been Shown Prominently, With Good Results, by One Master Plumber—People Seeing Samples in the Window Would Come Inside, Ask About the Heaters, and Often Buy—The Line Appeals Strongly to Both Men and Women, and is Well Worth Handling.

Winter, with the master plumber, is not the quiet season that it is with some business men. In the cold weather much outside work has to stop, though not nearly as large a percentage as was discontinued a few years ago. But heating and sanitary engineers have no cause to be idle. The walls erected before the snow came are the protection needed for their work. The winter through they have plenty to do installing heating and plumbing systems. Indeed, these next few months are among the busiest for men engaged upon new work.

Make the Store Work.

Yet, all the dealers have a store, which they use as a supply house for themselves, and from which they sell a certain amount of goods. Some sell a good deal to chance customers, others not so much. But while well nigh overlooked by many, this store business yields good profits. It might well be cultivated more.

There are some lines which sell from the store especially well at this season of the year, and among them must be mentioned the instantaneous heater. This contrivance, which enables a hot bath to be prepared while a person is disrobing, is something which appeals to all just now. Few men or women like to think of a cold plunge these frosty mornings.

Good Results Obtained.

A display of these instantaneous heaters in his window has brought one Montreal dealer good results. People, who have probably had trouble getting hot water for their bath room, have come in and asked the price of the heater. They have wanted to know how it worked. "Is it dangerous?" That is a regular question.

On several occasions a sale was made immediately. Other times the enquirer has gone off, probably to discuss the question with some other members of the family, but many times a return visit has been made and an order placed.

A heating contrivance which fits on the boiler is also being largely sold. It is not as convenient in some ways as the heater which is placed right by the side of the bath. In other ways it is considered better. With it there is nothing to crowd the bath room, and a

trip to the basement a few minutes before getting ready for the bath insures a good supply of hot water.

An Acceptable Present.

In many homes a heater such as these would be an acceptable present. People who would not wish to spend \$10 on some trinket or similar present, are quite willing to expend three or four times this if it is for something which will be of use in the house. Moreover, nowadays, the useful presents are gaining in favor with the receiver as well as the giver.

Plumbers have not as great a number of lines to present to the Christmas shoppers as have some other dealers, but in these instantaneous heaters they have an article which will appeal to many. Those men, therefore, who pay considerable attention to their store, would do well to handle these goods, and to give them a good deal of prominence.

ONTARIO OFFICERS.

H. J. Peter, of the firm of Peter & Sylvester, Stratford, is on the auditing committee of the Ontario Society of



H. J. Peter, Stratford.

Domestic Sanitary and Heating Engineers. He is a firm believer in the benefits of trade association and is a familiar figure at all provincial meetings.



Plumber—"Well, what have ye forgotten?"

Apprentice—"I ain't forgotten nothin' boss."

Plumber—"Ye ain't! Ye'll never make a plumber."—Judge.

CANADIAN FACTORY FOR SIROCCO FANS.

A Canadian factory for the manufacture of the products made by the American Blower Co., Detroit, Mich., has been established at Windsor, Ont., and will be known as the Canadian Sirocco Co. The company has acquired a tract of land comprising $4\frac{1}{2}$ acres, and will proceed at once with the erection of a plant which, when completed, it is stated, will be one of the most complete of its kind on this continent. The erecting shop, 50 x 200 feet, of steel and concrete construction, and an office building has already been commenced, and next spring the rest of the plant, including a machine shop and a plate and pipe shop, with foundry will be completed. The company will hold the exclusive rights for the manufacture in Canada of the Sirocco fans and blowers, together with a complete line of blowers, heating, ventilating, drying apparatus, steam engines, steam traps, and the like.

ON RETURN TRIP.

F. T. Rawley, Canadian representative of the Honeywell Heating Specialty Co., Wabash, Ind., was in Chicago this week on his return trip to Montreal. Mr. Rawley's genial personality has won him many friends in the heating trade in the Dominion.

General Buildings.

A \$200,000 store and office building is to be built at Prince Albert, Sask., by W. J. Christie.

Criticisms of Some Plumbing Advertisements

Members of Sanitary and Heating Trades do Not Pay Sufficient Attention to This Phase of the Business—Review of Current Advertisements.

IT has often been remarked in these columns that the amount of advertising done by members of the sanitary trade is entirely inadequate. The sanitary and heating engineer needs to ad-

The fall is, perhaps, the busiest time of the year, in the sanitary and heating lines. It would be advisable, therefore, for every man to do more or less advertising at this time. Some plumbers have recognized this necessity and have

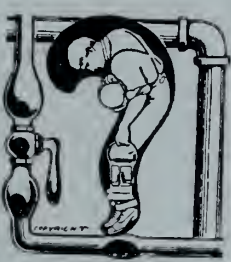
have some difficulty in getting the point.

The Cape Breton Electric Co.'s ad. is somewhat along the lines of this article—it aims to create a need, which is probably not felt at the present time.

A. C. Waltz & Co., have an ad. which is somewhat indefinite, and does not reach out for any special business. The Guelph Plumbing, Heating & Electrical Works have some good arguments in favor of the class of work they do. H.

**The Question Is
The Plumber**

not the value of plumbing. Our work warmly commended by those who have had the most difficult and intricate jobs to be done proof positive of our knowledge, skill, carefulness conscientiousness. May we have the pleasure of of classing you with our commenders? Estimates cheerfully given on all kinds of plumbing work.



PAULIN & RUTHERFORD
Phone 51 **SIMCOE**

**A
Warm
Bath-Room**

It takes so long to warm the house in the morning

Sometimes the bathroom is cold enough for an overcoat

Ever think what a convenience an electric radiator would be in your bathroom?

**CAPE BRETON ELECTRIC
COMPANY, LIMITED**

—When you require—

**Repairs or a New
Heating System!**

It will pay you to give us a call



There is no job too large nor too small for us as our facilities for handling all classes of work is unexcelled in this district. We also do **Plumbing and Electric Work**, and are prepared to give you prompt and efficient service

A. C. WALTZ & CO. Phone 301.
7 Court St. S.

IMITATION SUNSHINE!

Get some in Your house before the short days come!

We do electric wiring the safe way, and you can depend on getting all you pay for if WE do your work

All our work is inspected and passed by the Fire Underwriters representative, and a certificate granted, protecting you against defective workmanship. See us before you get your house wired—we protect our customers.

We sell fixtures too, of course, and can match prices of any of the big stores to houses. See our showrooms.

**The Guelph Plumbing, Heating
and Electrical Works**
26 WEST MARKET SQUARE
Geo. E. B. Grinyer & Co., Props. Phone 505

FOR SALE

Anything you require in the heating or plumbing line. Above systems installed and remodelled. Estimates promptly given

Telephone 345

H. G. HAGEN CO.
Heating and Plumbing Contractors.

PLUMBING

HOT WATER, STEAM
and HOT AIR HEATING

**GALVANIZED IRON WORK, ROOFING
and EAVETROUGHING**

We are continuing this part of our business at our new premises, corner of Simcoe and Bethune Streets.
Phone 88.

**ESTIMATES GIVEN ON ALL CONTRACT
WORK.**

**Adam Hall
LIMITED**

Some Typical Plumbing Advertisements.

vertise his business as well as the merchant and manufacturer. He has goods and services to sell. There are facts in connection with his business which should be put before the public. But very few ever do anything in the advertising line. That the trade suffers as a result of this attitude is undeniable.

conducted highly creditable advertising campaigns.

Paulin & Rutherford's ad. reproduced on this page, is based on a good idea—that the quality of the work done should be considered before the price. The language, however, is so involved, that the ordinary reader might

G. Hagen & Co., have worked out an ad. modeled after the ordinary want ad., and it is doubtful whether it will attract as much business as if it were included in the "For Sale" column. Adam Hall's advertisement is more of the announcement type, and is scarcely the kind that reaches out for new business.

A Professor's Hints to Members of the Craft

An Interesting Address Delivered at Half-yearly Meeting of the English Institute of Plumbers—The Necessity of Technical Education Urged.

LONDON, England.—The half yearly meeting of the Institute of Plumbers was held on November 15, at Huddersfield, when Councillor J. P. Cox, J.P., presided over a large attendance of members.

After a formal welcome from the mayor (Mr. G. Thomson), the president introduced Professor Radcliffe, of the Municipal School of Technology, Manchester, who adjudicated in a competition promoted by the journal committee. Competitors were required, he said, to prepare a specification and plans for the plumber's work in connection with the water supply to a country mansion.

A Professor's Hints to Plumbers.

Professor Radcliffe, who spoke on the invitation of the president, said he had been associated with plumbers and plumbers' work for more than forty years, and during that time had seen many changes. The old order of plumber's work had given place to the new, and many of the old plumbers who had done good work in their day, would not be able to satisfy modern conditions. The present tendency was to divide plumber's work into sections, under men who had received more or less specialized instruction, and that condition was such as to exclude many of the ordinary plumbers from competition. It was questionable whether the plumbers would be gainers if this sort of thing should go on. The men engaged under it were often not more than pipe-fitters, and could not, by any stretch of imagination, be compared to men who had had varied experience in plumbers' work. There was also a tendency to abolish the apprenticeship system, and for employers to take less interest in the welfare of the youths under their charge; at the same time the latter were taking less interest in their work than formerly. At the age of from eighteen to twenty, many of the youths began to look around for opportunities to earn a few more shillings per week. They went to employers seeking such labor at bankrupt rates, and were valuable to jerry-builders and people of that sort, but it was

of no ultimate advantage to either party. He (Mr. Radcliffe) had always maintained that plumbers' work ought to be done by plumbers, and that there should be an ample supply of plumbers available. The institute was endeavoring to establish a system of apprenticeship, which might result in remedying many of the difficulties of the trade, but this could not be done successfully without the co-operation of the masters, who should select for apprentices, lads who had had a good groundwork of elementary education.

The speaker congratulated the institute on the result of their educational work in so short a period. He had been carefully through the drawings submitted in the competition, and was pleased to see so many submitted, but he regretted to observe a marked difference in quality between the work of the first three or four and of the rank and file. He hoped that in future competitions, the judge would find more difficulty in selecting the prize-winners.

Public Authorities and Low Prices.

W. Challoner (Blackpool), in moving a vote of thanks to Professor Radcliffe, observed that some of the older plumbers were inclined to disparage education and to think that to beat lead and to make a joint were the only requisites for a plumber, but he maintained that if the lads were taught to use their heads as well as their hands, it would be to the advantage of themselves, of the masters, and of the public. His experience convinced him that the weakness of the trade to-day was the deficiency of elementary education on the part of the youths who attended the technical classes. They often went to discover that their elementary learning had evaporated, and it became necessary for the plumbing teacher to waste his time making good the deficiency. He advocated compulsory attendance at technical classes. Until something of this kind was adopted, they would continue simply to mark time. Another point was how to secure that ability should be paid at its value. Unfortunately, the

deciding factor now was not ability or training, but price, and the greatest offenders in this matter were the public authorities.

Public Buildings.

A Catholic school is to be built at La Prairie, Que.

A new armory building is to be built at Lindsay, Ont.

Notre Dame Normal School, Montreal, will cost \$200,000.

A graphic arts building to cost \$100,000 is to be built at Toronto.

A hospital building to cost \$15,000 is contemplated at Port Hope.

Two picture theatres to cost \$500,000 are contemplated at Montreal.

A boys' college is to be built at Granby, Que., to cost \$60,000.

Hon. J. A. Lougheed, is to build a theatre at Calgary, costing \$200,000.

A 4-room addition is to be built to the St. Patrick's ward school in Guelph.

A church building to cost \$15,000 may be built by the Presbyterians at North Battleford, Sask.

Alterations and additions are to be made to the Roman Catholic cathedral at Joliette, Que.

The Baptist congregations of London, Ont., are contemplating the erection of two new churches.

New parliament buildings are contemplated at Winnipeg. The cost is estimated at \$2,000,000.

The Knox Presbyterian church at Calgary, for which tenders will be called, is to cost \$400,000.

A church to cost \$200,000 for St. Viator Catholic congregation will be built at Outremont, Que.

The report of Superintendent Bishop, of Toronto, recommends the following new schools: Morley Avenue, 23 rooms, to cost, approximately, \$115,000; Brock Avenue, 15 rooms, \$75,000; St. Clair Avenue, 11 rooms, \$55,000; Clinton Street, 15 rooms, \$75,000; Howard, 12 rooms, \$60,000; Pync, 12 rooms, \$60,000; total \$440,000. The enlargements and alterations are: Lansdowne, supply room, \$10,000; Jesse Ketchum, workshop and storeroom, \$30,000; Malvern Ave. High School, six new classrooms and assembly hall, \$60,000; Brant Street old school, now used as a workshop, renovation, \$15,000; total, \$115,000; purchase of sites, \$45,000; total, \$600,000.



TOPICS OF THE TRADE



MASTER AND JOURNEYMAN.

Editor Plumber and Steamfitter — Sir,—In your issue of 15th inst. I notice an item, "Keeping tab on the journeymen," and, in my opinion, it is not in the interests of the trade, and would tend to drive master and journeyman farther apart rather than working to one another's interest, as it should be. Just here I would quote part of a conversation I had with the late Robert Ross, who was held in high esteem by both master and man. His statement was that the master could not get along without the men, and the men could not get along without the master. Therefore, it was necessary that they should get together and work for one another's interest. In my experience I have found that in many cases where one journeyman would not suit one master, another master would be satisfied in every way. It depends a good deal upon the class of work. No master can tell whether a man is competent or not until he gives him a fair trial. There is one item in your article which is ridiculous in the extreme, viz.: He can tell if he has left any employer without giving fair notice. I would just like to ask how many masters give their employees fair notice when they are discharging them, in the trade in Toronto, and I speak without fear of contradiction that I never knew of a master giving any notice whatever. You get a note in your pay envelope stating that your services are no longer required, and in other shops you are told there is nothing more to do. If the masters in Winnipeg want fair notice they in turn should be prepared and will ing to give the employee fair notice also.

Trusting you will publish this,

I remain yours respectfully,

Journeyman.

Toronto, Nov. 16.

USING DISCARDED RANGE BOILERS.

Editor Plumber and Steamfitter: — When a galvanized range boiler begins to leak it is generally relegated to the scrap heap, for experience has shown that soldering it is next to useless, and,

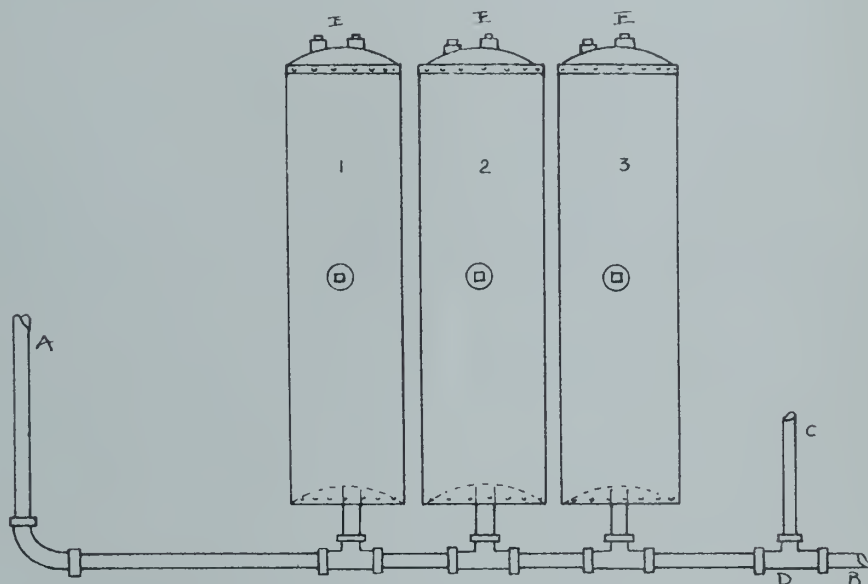
if the leak is in a place where it can be reamed out and a plug inserted, it will, at best, be only a short time until another hole breaks out somewhere else; that is in such cases where their use is continued as hot water reservoirs. When they are to contain cold water, it is different, for the cold water does not appear to have the corrosive effect upon the iron which the hot water does. Many plumbers, in small country towns or villages, could work the following scheme to advantage, giving their customers the benefit of the reduced cost. The said

bottom holes in the tanks are used, all other openings being plugged as shown. Care should be taken to see that the plugs at EEE are perfectly airtight, as the satisfactory operation of the system depends upon the air pressure formed above the water in the tanks. A relief or safety valve could be attached to the pump or anywhere along pipe B.

J. E. N.

Toronto, Nov. 18.

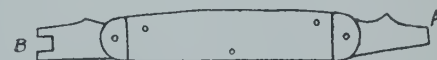
Editor Plumber and Steamfitter: — One of the handiest tools a plumber can



plumbers can secure from the city junk dealers, at about 50c each, any number of discarded range boilers, most of them in fair condition. By carefully cleaning the defective parts and soldering them they will be o.k. for use as cold water reservoirs, and it will be found that they will hold pressure up to 60 lbs. gauge for years (in most cases) with absolutely no trouble. A friend of mine rigged up several of them in his country villa as shown in fig. 1.

A is the feed pipe to baths, range boiler, sink, etc.; C is the small pipe upon which the pressure gauge is attached, and pipe B is from the force pump. A check valve is placed upon pipe B between the pump and tee D. Only the

carry with him is shown in the accompanying sketch. Take a discarded jackknife with a couple of broken blades in it. File one end as at A, the other end like B. This makes a screwdriver and a wrench, and is a handy tool to remove



the washer screws or nuts on compression cocks. It will also be useful for other small work.

Municipal Undertakings.

A by-law will be submitted in Battleford, Sask., to provide \$10,000 for a waterworks system and sewers.



POINTS ON HEATING

By
CHAS. H. DENISON



Chapter 19.

Greenhouse Heating.

The raising of flowers and certain vegetables in greenhouses located somewhere in the suburbs of our large cities, or in some places the greenhouse may be located on an unimproved lot on some street in the town or city, has advanced greatly in the past few years. In a closely populated district, the writer observed a greenhouse located on top of a two-storey flat building and seemingly getting in good action.

Years ago the way they heated greenhouses was flues and a furnace. A pit was sunk at one end of the greenhouse into which the furnace was built. The smoke flue ran through the centre of the house, and the heat given off was supposed to be enough to do the work. This was not a satisfactory arrangement. The heat was not uniform, and sometimes got so hot that the vegetation raised was spoiled, the gas escaped and the fires could not be regulated with precision.

When steam and hot water heating appeared in the field, they were seized upon, and are, to-day, made use of in heating greenhouses. Both these systems have their own advantages with regard to greenhouse heating in the observation and experience of the writer. For a small, or medium sized house, it would seem as though hot water were to be preferred; but in some places where there are several hundred thousand feet of glass, steam heat seems to be installed. I do not state that this is so everywhere, but in the places, only, that I have actually visited, or installed the heating.

In a moderately large house, where a fireman is not kept on the job, which may receive scant attention, the hot hot water job will do better, for the heat stored up in the water will last for several hours before there is any danger of the temperatures getting too low. The hot water system will probably cost more, however, as much more radiation is required for the job, but the cost of running it day after day is generally less than the cost of running a steam plant of the same size.

Some of the first hot water pipes that were put in were of cast iron, and the joints were not caulked with lead. What was called rust joints were then used. A cement made of iron filings and sal ammoniac mixed with water was made, which was caulked into the joint after the oakum was forced in place. I have observed in some places that these joints were not always as tight as might be desired.

When you get to be a millionaire, you will probably have a greenhouse attached to the house, but you'll take on some airs and call it a conservatory. One reason why I am writing this article, is because I have seen a number of greenhouses that the owners have installed the work for themselves, and I think that it is bad practice that the fitter allows any such work to get away from him.

Greenhouses are generally built so that they can receive all the sunlight possible. This means that they are exposed. There is also a large amount of glass surface, which calls into play a much heavier allowance of radiation than is required for other work.

Different temperatures are required for the different things to be raised. Roses, it is stated, require a temperature of from 65 to 60 degrees, while mushrooms may be raised at from 54 to 56 degrees. Therefore, if one is to grow several different things at different seasons, the heating plant must be designed to have the power to furnish the required heat.

One method of estimating the radiation required, is to divide the number of square feet of glass surface and equivalent surface by eight, when steam is intended to be used; while for hot water the divisor used is five; this, it is stated will give, under ordinary circumstances, a temperature in the greenhouse of forty-five degrees.

If it is required to have a temperature of 60 degrees, steam heat in the greenhouse, use six for the divisor (as explained previously), while for hot water heat and a temperature, the divisor should be three and one third. Should it be desired to acquire a temperature of 70 degrees in the green-

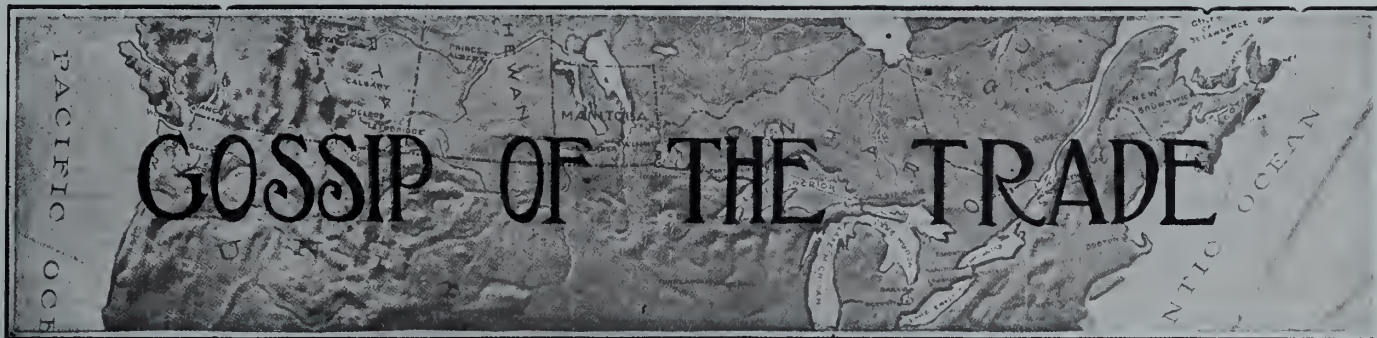
house, for steam use the divisor five, and for hot water use three.

Some years ago there was a genius who arose on the heating horizon who did his own greenhouse heating, and claimed that he had discovered certain new principles, and the way that he went at some of the regular engineers was something fierce. He had them all running criss-cross for a spell; but when things settled, there did not seem to be so very much doing. One of the points I seem to remember of this genius, was that he claimed that it did not make any difference (in the hot water heating), as to whether the pipes had any pitch at all.

Well, he seems to have dropped out of sight, and none of his ideas are in use to-day that I know anything about. Using the best practice of the day, we may assume that it is necessary to have a certain amount of pitch on both the steam and hot water pipes either in greenhouse or house heating.

In most of the greenhouses, the writer has observed the main supply pipe is run overhead, and the heat radiating pipes under the benches which contain the earth in which the plants are raised. If a pit can be dug at one end of the house without the danger of its being filled with water, at certain seasons when the heat is desired it is done. This is not entirely necessary, as the boiler can be set on the floor level if desired, and if steam is used, steam traps can be used to perfect the heating should it be a steam job.

The greenhouse business is one that is quite profitable, if it is managed rightly, and one in which there should be a profit also to the steamfitter who installs the work, and it is but another instance of the way he overlooks business, when a man who erects the house does his own piping and installing of the job. I mention this because I have known several instances in which greenhouse men have done their own work, and if they can do it and make the job work, the fitter should not be afraid to tackle the job, as was one firm that I got next to. Look about you and see if you cannot dig up a greenhouse customer for a job.



A New Business.

Mr. Scanlin is opening up a plumbing and tinsmithing business in Port Colborne, Ont. He has acquired and is renovating a good sized store.

A Busy Place.

The Mitchell (Ont.) Advocate says:—"One of the busiest spots in town is Mr. Werner's plumbing, tinsmith and stove shop. Although he employs a large staff of men, he finds difficulty in keeping up with orders."

A Straw Burner.

R. L. McNaughton, a tinsmith, of Craik, Sask., has succeeded in making a new and improved straw-burner.

Gas Stove Regulator.

Frederick W. Magee and T. W. Baker, London, have secured a patent for a gas stove regulator.

Held a Smoker.

The Plumbers' Union, Montreal, held a smoker on the evening of Tuesday, Nov. 21, in the Labor Temple. There was a splendid programme, and the attendance was unusually large.

Fire in Factory.

In a fire in the Vulcan Iron Works of T. McAvity & Sons, St. John, N.B., Edward Shaw, the night watchman was seriously burned. Damage to the building to the extent of \$500 was done.

Gossip

No Charge for Meters.

After the first of the year, no charge will be made for the use of water meters in Toronto, and on Jan. 1, a vote will be taken, in which the people will say whether they wish to have water mains laid in new localities as local improvements. This change would do away with the necessity of furnishing bonds.

Propose Public Lavatories.

Dr. Louis Laberge, Medical Health Officer of Montreal, has suggested to the Board of Control, that public lavatories be established at various places throughout the business section. Montreal is destitute of these, for though they have been proposed from time to time, the

administration has never felt that it had the money to spend on their establishment.

Was Badly Burned.

While searching for a leak in a gas pipe at Mrs. Benson's residence, on the Don Mills Road, Toronto, Norman Swanson, a plumber, was seriously burned on the face and hands.

Swanson had found one leak in the place, and was searching for another. He had a lighted candle on the floor near him, and was lifting up a plank when there was a sudden explosion.

Flames shot up and burned him on the face and hands.

More Inspection.

There is now a plumbing inspector and an assistant plumbing inspector in Ottawa, employed by the city, but Ottawa is growing so rapidly, and there is so much plumbing to inspect, that Medical Health Officer Shirreff is recommending additions to the staff.

Had No Licenses.

A number of cases have occurred recently, where men doing plumbing work without licenses were fined. Two men in Windsor were given \$4.25 for this offence with the option of 10 days in jail. Several cases have occurred in Toronto, and it is reported that there are more on the way.

Death of a Master Plumber.

Adrienne Francocur, master plumber, of Thetford, died Thursday night, after a lingering illness.

He visited Quebec during the exhibition last fall, and not being then in good health, met with an accident, which caused him to be in the hospital several weeks. He was brought back to Thetford as soon as he could be moved, with the hope that he would recover.

He leaves a widow and family, and his loss is much regretted by a large circle of friends.

Fell Three Storeys, Unhurt.

Louis Parizeau, a plumber, fell from the third floor of the old Post Office Building, Montreal, last week. He

struck the sloping roof of one of the temporary wooden gang ways. This must have broken his fall, for after he had been taken to the hospital, it was discovered no bones were broken. The man's most serious injury was a severe shaking up.

A Fuel Saver.

E. S. Coppins, plumber, Woodstock, Ont., has on display in his window a range, equipped with an "economizer," which is claimed to have the power of reducing fuel consumption very materially. He has secured the agency for Oxford County.

News Briefs.

The Barnes Hardware Co., Port Arthur, have been succeeded by Barnes & Co.

The Biggar Heating & Tinsmithing Co., Calgary, have been succeeded by N. MacLeod.

It is understood that Christie Bros., Winnipeg, have been succeeded by the Canadian Heating & Ventilating Co.

H. H. Jackson, and W. R. Dick, have opened tinsmithing shops at Swint Current, Sask.

Theft of Tools.

For several weeks past the police of Toronto have been endeavoring to run down a gang of thieves who have been stealing steamfitters' and plumbers' tools from buildings in different parts of the city. Following the arrest last night of a man who keeps a plumbing establishment, the detectives hope to break up the gang within a few days. After he had been placed in the cells, Acting Detective Nursey recovered seven sets of steamfitters' stocks and dies, worth \$18 a set, which are alleged to have been purchased by the prisoner. The latter was refused bail. William Schulkins, of 932 College St. W., claimed two sets of those recovered, and others were claimed by Keith & Fitzsimmons and Fiddes & Hogarth, contracting plumbers and steamfitters. According to the police, over \$1,000 worth of steamfitters' tools have been stolen during the past seven weeks.

Shot in Leg.

Theodore Prince, master plumber, at 555 Bloor West, Toronto, was shot in his left leg by a charge of shot from his own gun while duck shooting on Lake Simcoe, near Port Bolster, a flag station $2\frac{1}{2}$ miles north of Pefferlaw. Mr. Prince was tramping through a marsh, carrying his gun muzzle downward, when he tripped over a snag. He was thrown forward and the gun struck a log, exploding. The camp was eight miles from the scene, and an impromptu stretcher was hurriedly constructed and

Prince rushed into camp, where first aid was administered.

Brisk Business in New Ontario.

James Murphy, of New Liskeard, Ont., was a recent visitor at the Toronto office of Plumber and Steamfitter. His trip to Toronto was in quest of journey-men plumbers, who, he says, are very scarce in the north country.

At the present time, Mr. Murphy has contracts in Cochrane and Porcupine, as well as in his own town of New Liskeard. He has just installed the plumbing in the public school at New Lis-

keard, which is one of the most up-to-date jobs in New Ontario. He is also doing the work in the Bank of Ottawa Building, Cochrane. This is a thoroughly modern job, with hot water heating and an up-to-date plumbing system. The building is of solid brick.

Mr. Murphy is a strong association man. He worked for two years to put a sanitary by-law through in New Liskeard, and finally succeeded. He states that the unsatisfactory freight service is one of the draw-backs to the trade, in Northern Ontario. Claims for breakage are very slow in being settled.

The Necessity for Rigid Inspection Demonstrated

Cases in Toronto Where "Quick Plumbing" Has Resulted in Unsanitary Conditions—All Work Done in Toronto This Year is to be Subjected to Smoke Test by the Inspectors.

MEMBERS of the trade in Toronto, who have not been abiding strictly according to the letter of the by-law, have cause to tremble. The announcement has been made that all work done since January 1 is to be put to the smoke test. The intention of the authorities at the first of the year was that the smoke test was to be used in every case but, as only two machines were available, a large percentage have been let off with the water test. But now the health authorities are compiling lists of all the jobs done since the first of the year and those which were not smoke tested will be subjected to that test at once. It is understood that two more machines will be secured and the necessary number of inspectors added to the list to get the tests all completed.

Many complaints are heard as to the thoroughness of the system in Toronto. It is not the fault of the inspector's department. The inspectors have all and more than they can do to make the necessary tests on new work. What is needed is an inspection of buildings to ascertain what old work needs overhauling and renovating. There are numberless cases where houses are served by systems hopelessly inadequate and unsanitary in the first place, but now so bad that they seriously menace the health of the occupants.

A couple of instances have been brought to the attention of Plumber and Steamfitter recently by members of the trade in the Queen City. The first might be headed "Quick Plumbing in a Quick Lunch." In a restaurant of the variety generally and quite accurately termed "quick lunch counters," the waste pipe from two copper sinks under the counters runs into an 18 by 30 sink in the basin, from which it is drained

off in the regular way. The grease and waste matter generally from the restaurant proper is drained into the basement sink before being carried off. The plumber who discovered this stated that he could find no traces of traps or vents in the system.

A Cheap Job.

Just as unsanitary was a job discovered by another plumber on being called in to do some repair work in a small apartment house. On the ground and first floor were two 18 x 30 sinks, the stack ending on the first floor. These sinks emptied into a $1\frac{1}{2}$ in. lead waste running to the basement and ending some little distance from the cement floor. Under the end of the pipe was a bell trap, into which the refuse emptied and was carried off to the drain. Needless to state, the refuse from the sinks flooded out of the open pipe all over the basement floor. The aroma resulting from this overflow escaped back up the pipe and permeated the apartments above.

The whole job was without a vent. Some laundry tubs in the basement, emptying into the same drain, were not vented either.

It is stated that this job was done within the last two years.

Advertising must make a thousand customers want to buy.

When the salesman who, by force of his stronger personality, persuades a weaker man than he to buy what he does not want or more than he needs, or more than he can afford to buy, he is illustrating the difference between selling a man and making the man want to buy the goods for their value's sake—their worth's sake to him.

The victim in that case is buying not goods, but experience—and sometimes dearly.

A sale of that kind has no permanent value and is usually cancelled; or, if not cancelled, is consummated under protest.

It makes enemies, not friends.

Personality Versus Merit.

The other kind of selling—the selling that creates the desire to buy, has a deeper foundation than that of a temporary surrender of will. It goes to the very foundation of things and builds business from the ground up.

The word-of-mouth salesman depends on his own personality more than on the quality or merit of his goods.

The printed salesman depends more on the merit of the goods or proposition advertised than on personality.

Yet there may be and indeed must be personality in the printed or written selling talk—for the composite buyer has a human side—a heart—just as the individual has; and the man who can best play on the soul side of the vast audience who reads his ads., his form letters or his booklets, is the man who has come the nearest to the secret of success in the important matter of building business friendship by wholesale.

TALK TO SALES MANAGERS.

The problem of winning the individual and collective heart of a vast and unseen multitude is very different from the problem of persuading one man face to face, eye to eye.

A clever salesman may sell a customer.

News of the Manufacturers and Wholesalers

H. T. BUSH HONORED.

A despatch from Port Hope says:—A committee waited upon Mr. H. T. Bush, at the King Edward Hotel, Toronto, and tendered to him the presidency of "The Sanitary Co., of America," having its head offices at Philadelphia.

This large corporation operates a number of big porcelain plants as well as brass and soil pipe factories, with numerous jobbing houses in the various cities in the United States and Canada. Mr. Bush has the offer under consideration and will visit New York, Philadelphia, Pittsburg, and other points, to confer with the various heads, sometime during the present month.

Mr. Bush is offered free hand in the control of the policy of this monster corporation.

It would seem that he is well appreciated where he is best known, and where his great ability is understood.

A PIPE HANGER.

A temporary pipe hanger, which takes the place of the temporary make-shift hanger that the mechanic is obliged to construct with boards, or a piece of chain, when he is working on a job, has recently been placed on the market by the Milwaukee Heat Generator Co., Milwaukee, Wis., says the Metal Worker. This hanger, which is shown in the accompanying illustration, is to be known as the Eureka hanger. With a set of the Eureka hangers, it is claimed that the steamfitter can hang his entire mains



temporarily, and put on all permanent hangers at the same time. These hangers are made of wrought iron chain and malleable iron. They are designed to be fastened to a joist and taken off rapidly, and are claimed to be a time and money saver for the master fitter.

A SPACE-SAVING COMBINATION.

The Standard Ideal Company of Port Hope have just put a new combination sink, wash tub and bath on the market. It is called a space saver, and is meant for use in small houses or apartments where every bit of room is utilized. The contrivance, which is made of enamel, takes little more room than an ordinary sink. It stands near the ground, but a sink on hinges fits in the top of one of the wash tubs, and a drying board folds over the other tub. If the wash tubs are to be used the sink and the wash board are thrown up. Then, when the maid wishes to take a bath, there is a dividing bit of metal which separates one



wash tub from another, which may be pulled up after the loosening of two bolts. A full sized bath is thus made, as comfortable as the regular baths used in well appointed bath rooms.

ENLARGEMENTS TO PLANT.

The heavy demand of the summer has necessitated enlargements being made in the plant of Warden King, boiler and steam fitting manufacturers, Montreal. Extensions have been made to the machine shop and the power house. Now the prospects for an even busier time next season are so bright that estimates are being secured on the cost of still further enlargements.

WORK DELAYED.

The work in connection with the Steel and Radiation factory, at St. Catharines, has been held back on account of a delay in the railway switching. However, everything has been straightened away, and the work is now proceeding nicely. The cement foundation and steel

framework are now in place, and the building will be rushed through to completion. The company have thirty-three acres of land, and they are now arranging buildings that will well cover half that amount. The buildings, estimated as a whole, are about 400 by 250 feet. They are a machine shop and a foundry 240 x 120 each, a shipping warehouse, a cleaning room, which is expected to be riveted, and in readiness by December 19, and a pattern shop.

FURNACE WATER FRONT.

Giblin & Co., Utica, N.Y., have issued to the trade a booklet describing their new water-front. The new water-front is placed in the fire-pot in direct contact with the fuel, between the mouth-piece of the feed-section and the mouth-piece of the ash-pit. The manufacturers claim that as it is at this point that



the greatest damage usually results to the furnace-castings, a Giblin furnace water-front contributes to the life of the furnace by preserving them. The water-front is easily inserted through the feed-door after the furnace is erected, without disturbance of the setting. The interior construction of the casting is such that the cold water is forced, after it enters the casting, to pass to the bottom, and then start over and upwards on the other side to the hot-water outlet.

A by-law will be submitted to the ratepayers in Scott, Sask., to raise \$26,000 for waterworks and \$10,000 to complete the sewerage system.

PLUMBING AND HEATING MARKETS

MONTREAL.

Montreal, Nov. 29.—The large demand for goods, which is being felt by all the local supply houses, indicated that the call for all kinds of manufactured products has been greater this year than the production. Boilers and radiators, for instance, are still in great demand. This somewhat unusual state of affairs does not indicate only that the supply of boilers has been insufficient to enable prompt filling of orders, but also that the urgent call for bricks, and other building material, has been so great that the work of supplying the goods was delayed.

As a result, many buildings are only now reaching that advanced stage where boilers and radiators may be installed.

During the last week, heavy shipments have been made by boat to the West. The back of this business, it is expected, has now been broken. The smaller dealers laid in a good supply while they could benefit by the cheap water freight. They will do as little buying as possible from now until spring.

So many orders came from the West indeed, that prompt delivery could not always be given. Telegrams, urging haste in delivery, are coming to the manufacturers daily. They are proving a regular bugbear.

Enamelware.—How great have been the orders in this line may be understood when it is stated that a new show room, established in Montreal, has been unable to secure all the goods wanted for display. The factory simply cannot send samples of some lines, for even the samples are being delivered to customers.

The orders come from east and west, there evidently being a great deal of new work to install yet. It is stated this will not fall off noticeably until well into January.

Boilers and Radiators.—“We’re able to fill our orders, and that is all,” remarked the sales manager of one large manufactory. “We can’t get any stock ahead. As soon as a boiler is made, it is shipped to meet the need of some dealer.” The brisk business in this line, it is said, will certainly continue for some weeks.

Soil Pipe.—There is rather a scarcity of this material. Only now are the walls of a lot of new buildings being finished. This means that the need of soil pipe is only now being felt by a lot of contractors. They are sending in large orders, and since the supply is none too large, they are often having to wait for the goods.

Lead Pipe.—Here, too, there is a shortage, due of course to the shortage of pig lead. Prices still are quoted at 25 per cent. discount, but an advance is

practically certain to come soon. Many dealers have been trying to get a good supply on hand, but have signally failed to do this. The handlers are not anxious to sell in large quantities.

Iron Pipe and Fittings.—This line is still extremely scarce. Especially is there a shortage of 1½-inch piping, both in black and galvanized. This is partially due to large orders coming in from the West, but is also the result of large eastern buying. The mills report a better condition as far as supply is concerned. They state that they will soon be able to fill orders promptly.

Solder.—The demand, which has been exceptionally good, is falling off somewhat. This is to be expected in the late fall.

TORONTO.

Toronto, December 1.—Plumbing supply houses in this city continue to find business exceedingly good in all lines. The heavy building operations now being brought to completion, call for all kinds of plumbing and heating supplies, with the result that both jobbers and master plumbers are exceedingly well satisfied with the situation.

No price changes have been made, since our last report, and the situation in this respect, is said to be very steady.

Enamelware.—A very large demand is being experienced in this line, and one of the chief troubles of the supply houses, is to get goods from the manufacturers. So many large buildings will receive their finishing touches during the next couple of months, that no slackening in the demand for enamelware is expected until well into the New Year.

Boilers and Radiators.—The season for heating goods is being rather unusually prolonged this year, owing to the scarcity of brick early in the season, which somewhat delayed building operations. Business is still very brisk with no apparent indication of a let up.

Soil Pipe.—The amount of soil pipe being bought at the present time, is really very large. The same reason as is given for the heavy trade in plumbing supplies generally, may be advanced to explain the condition in soil pipe, namely, that a vast amount of building is just reaching the finishing stages.

Lead Pipe.—The advance recently declared in lead pipe has held steady, and, in fact, there is a likelihood of a further rise in the very near future, due to the continued scarcity and high price of pig lead.

Iron Pipe and Fittings.—This is another line which the supply houses find it easier to sell than to buy. There is a noticeable shortage in some sizes, and prices are firm.

Solder.—The ruling high prices of tin and lead keep this line very strong in tone. As the season advances, however, the demand is becoming less acute.

ADVERTISING AS A VITAL FORCE IN BUSINESS.

R. R. Shuman, in a recent address before a gathering of sales managers, in Chicago, said in part:

Nobody can talk slightly about advertising in my presence. Nobody can call me “Only an advertising man” in my presence. My calling is vital. Its possibilities are boundless. Its power cannot be measured by the yard stick with which you measure the individual salesman. It is the new force in business that lays foundations of future greatness. Its work is permanent. Its responsibilities, too, are multiplied by the magnitude of its opportunities.

Every advertisement talks to an audience, and every audience has its own personality—its composite heart and soul, hopes and fears, likes and dislikes. It is different from any other audience, and it must be appealed to as a composite personality, rather than an impersonal thing.

That audience is a harp of myriad strings and every clear true note I utter sets corresponding harp strings and heart strings to vibrating in harmony with me.

I must be discreet, for the printed word, with no trick of eye or voice to interpret it, is so easily misunderstood.

I must be truthful: for there is no unsaying or explaining away a thing once said.

And above all I must speak in simple language.

Let me say that again; Advertising to succeed must be expressed in simple language. In short, it must be easy reading, and it must be worth reading.

Lincoln said that the Lord must have loved common people or he wouldn’t have made so many of them.

When you advertise you are talking to common people; or even if you are talking to a special audience of the cultured few, your best success lies in sounding the homely notes that are common to all.

No advertisement was ever great just as no oration was ever great that did not ring true.

No advertising man ever achieved permanent greatness who did not speak from the heart—and honestly.

A clever salesman may deceive and delude one man, but no man is shrewd enough to deceive a multitude—not for any length of time. Let him try it and a thousand eyes will bore deep into his insincerity and a thousand tongues will expose his rascality.

PLUMBING SUPPLIES

National Lowdown Closets
Imperial Lowdown Closets
Enamel Lavatories
Enamel Sinks
Galvanized Boilers
Enamel Baths
Plumbers' Brass Work

Gas Fittings
Malleable Fittings
Cast Iron Fittings
Soil Pipe
Soil Pipe Fittings
Black and Galvanized Pipe
Tools, Etc.

**The National Plumbing Supply Company, Limited, 115-117-119 Adelaide Street West
TORONTO, ONTARIO**



Hot Water Quick Opening Radiator Valve.

"Miller" Hot Water and Steam Radiator Valves

The bodies and bonnets of our Hot Water Quick Opening Radiator Valves are made in one piece, thus having a great advantage over other valves, as it leaves one less joint or possible leakage. The cone-shaped Disc prevents sticking.

Our superior Steam Radiator Valves have very low seats and a high lift of Disc.

We manufacture both valves from $\frac{1}{2}$ " to 2", with or without union, also union elbows.

Every valve is thoroughly tested and has an unlimited guarantee. They are built for service. Ask your jobber for them.



Steam Radiator Valve.

MILLER LIMITED, - LONDON, CAN.



KERR

Steam and Hot Water RADIATOR VALVES

are past the experimental stage.

They set the standard for high quality in material and finish and stand the many tests of use.

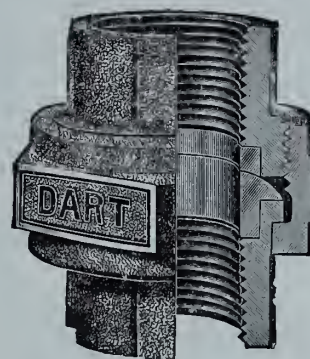
Note the seats in Kerr's New Pattern J.D. Radiator Valves which insure perfect drainage.

The Kerr Engine Co., Ltd.

VALVE SPECIALISTS

Walkerville - - Ontario

DART UNIONS



Eliminate troubles.

Save in installation costs.

Every one guaranteed.

YOUR JOBBER SELLS THEM

Dart Union Co., Ltd.,
Toronto - Manufacturers

Condensed or "Want" Ads.

BUSINESS CHANCES.

FOR SALE—Good tin-smithing and plumbing business in a thriving Western town. Soap. Good reasons for selling. G. E. A. ROBINSON, (24) Elora, Ont.

FOR SALE—Good plumbing, heating and tin-smithing business in flourishing town of 15,000 in Western Ontario. Established 20 years. Box 607, PLUMBER AND STEAMFITTER, Toronto. (3)

PLUMBING, Heating and Tin-smithing Business for sale in best town in Canada. Satisfactory reasons for selling. Established six years. Stove business in connection. Apply Box 592, PLUMBER AND STEAMFITTER, Toronto. (19tf)

SITUATION VACANT.

WANTED—Salesman with connection with the Plumbing Trade in Maritime Provinces and familiar with the selling of brass goods, to handle high grade lines on commission basis. Box 611, PLUMBER AND STEAMFITTER, Toronto. (24)

PARTNER WANTED.

WANTED—Capable and reliable plumber or steamfitter to invest \$1,000 in a good growing business and take up the active management of same at salary to be arranged. Address Box 606, PLUMBER AND STEAMFITTER, Toronto, Ont. (24)

SALESMAN WANTED.

A TRAVELING SALESMAN, acquainted with the wholesale and manufacturing trades in the Maritime Provinces, to represent the MACLEAN NEWSPAPERS, looking after our advertising in this district. Good position for progressive young man. Aply, stating full particulars, THE MACLEAN PUBLISHING CO., LTD., 702 Eastern Townships Bank Building, Montreal. (23)

MISCELLANEOUS.

ADDING TYPEWRITERS write, add or subtract in one operation. Elliott Fisher, Limited, Room 314, Stair Building, Toronto.

A BOOK-KEEPING STAFF IN ITSELF, DOING the work with machine precision and accuracy—the National Cash Register. Write for demonstration literature. National Cash Register Co., 285 Yonge Street, Toronto.

ACCURATE COST KEEPING IS EASY if you have a Dey Cost Keeper. It automatically records actual time spent on each operation down to the decimal fraction of an hour. Several operations of jobs can be recorded on one card. For small firms we recommend this as an excellent combination—employees' time register and cost keeper. Whether you employ a few or hundreds of hands, we can supply you with a machine suited to your requirements. Write for catalog. International Time Recording Company of Canada, Limited; office and factory, 29 Alice Street, Toronto.

BUSINESS-GETTING Typewritten Letters and real printing can be quickly and easily turned out by the Multigraph in your own office—actual typewriting for letter-forms, real printing for stationery and advertising, saving 25% to 75% of average annual printing cost. AMERICAN MULTIGRAPH SALES CO., Limited, 129 Bay St., Toronto.

COPELAND-CHATTERSON SYSTEMS—Short, simple. Adapted to all classes of business. The Copeland-Chatterson Company, Limited, Toronto and Ottawa. (tf)

COUNTER CHECK BOOKS.—Write us to-day for samples. We are manufacturers of the famous Surety Non-Smut Duplicating and Triplicating Counter Check Books and Single Carbon Pads in all varieties. Dominion Register Co., Ltd., Toronto.

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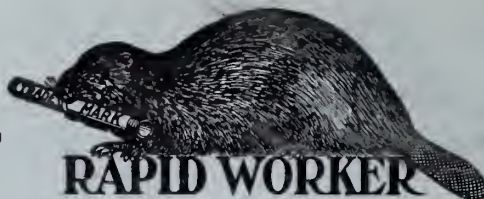
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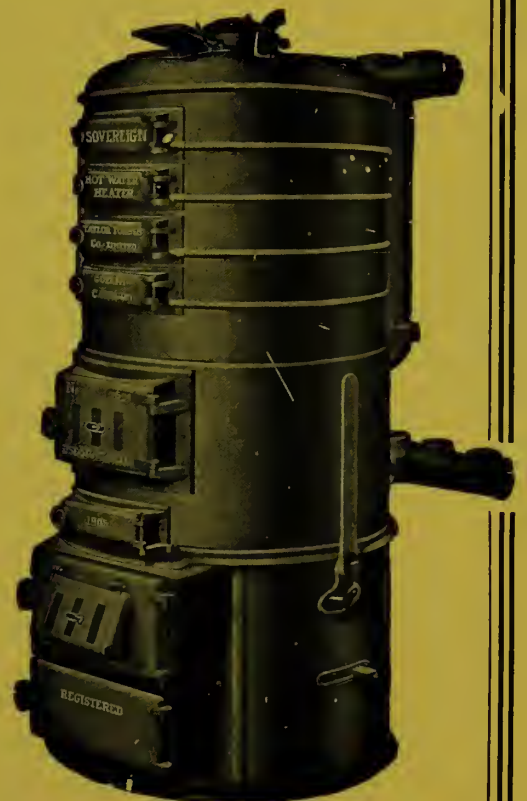
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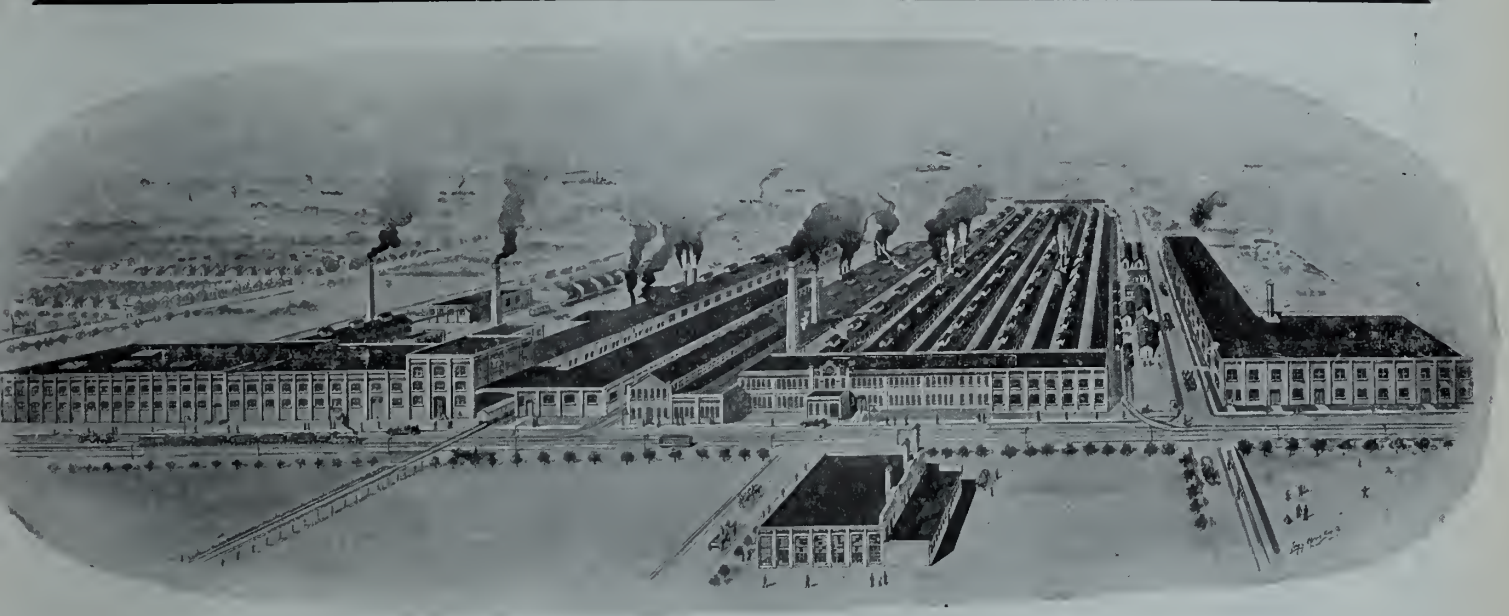
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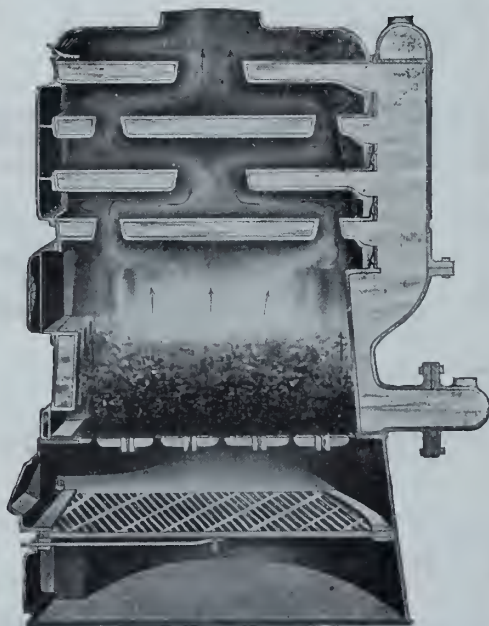
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He may be a respectable, well-meaning chap, but if he stopped *learning* ten years ago, he would be a poor investment as a profit-maker or a business-getter, wouldn't he?

You would no sooner employ him because of what he *was* than you would locate on a back street because it was once the town's main thoroughfare.

In the face of to-day's strenuous competition to stick to out-of-date ideas, antiquated methods and moss-grown workmanship is to cultivate a crop of displeased customers, big expenses and reduced profits.

Condemning these, however, is not to question the value of *experience*—but experience of the *cashable kind* is progressive. It is accumulated knowledge—not what a man *knew*, but what he *knows*.

Apply that to the heating goods you install—

In this business manufacturers as well as contractors *learn*. Observation and every-day run of business disclose weaknesses in and suggest improvements on existing products, most of which, for various reasons, can be embodied only in an *entirely new pattern*. For that reason a boiler designed ten years ago is in the same class with the man who hasn't learned anything since then.

The "KING" Boiler is *new*. It represents *progress*. It illustrates what is known in 1911 about heating surfaces, grate areas, water circulation and fuel combustion. Its inventive features are based on ideas and facts culled from the lifetimes of many men in designing, installing and inspecting heating.

The improvements that have been made, some of which are shown in the column at the left are all *useful, practical advantages*, making the boiler a little more *efficient*, a little easier on coal and simpler to install, hence a more profitable proposition for you in every way.

Think this over and order a "KING" when you next have a customer who is hard to please.

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and Sanitary Engineer of Canada

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TORONTO, DECEMBER 15, 1911

SINCE THE organization of the Ontario Society of Domestic Sanitary and Heating Engineers has been completed by incorporation, the question of affiliation with the national body, the Canadian Society of Sanitary and Heating Engineers, has become

A FIXED AMOUNT IS SUGGESTED. of considerable moment. As matters now stand, some difficulty is likely to arise over the question

of the per capita tax.

The facts of the case are as follows. The fees to the national body are \$3 per head. The Ontario Society has arranged its per capita tax on the basis of \$5 per member for every member up to ten and \$1 for every member over that number. Now let us see how things would work out. Toronto has, say, fifty members, and will under the new rules pay \$90 a year to the Ontario Society. But if the provincial body becomes affiliated with the national society, the fees to be paid for the Toronto membership would be exactly \$150; in other words, the provincial body would pay more to the national than it would receive itself.

There are two ways in which the difficulty might be solved. One is to have the local associations pay direct to both provincial and national. The other is for the provincial to pay a certain sum to the national, the amount to be fixed in accordance with the revenue.

The outstanding feature of the case is the necessity for collusion between the various bodies, if success is desired. The work of organization would receive a serious setback if the provincial associations did not work in co-operation with the central body, the national. The existence of a strong and aggressive Dominion body, is needed to give unity to the work carried on separately in various parts of the country. Only by the holding of Dominion conventions, can men from the different provinces get together and discuss plans for the general betterment of trade conditions. Ideas are broadened and mutual assistance lent through the medium of interprovincial meetings. At the same time, the provincial association is needed to govern matters of purely provincial interest, to draft regulations for that section and to exercise a practical influence. The relation between the two bodies is somewhat similar to that existing between the provincial and Dominion legislative houses.

A MERRY CHRISTMAS and Happy New Year to all.

STOCK TAKING is an essential feature of business. It cannot safely be neglected.

BY THE TIME this issue is in the hands of our readers, Christmas will be only a few days off. It is the sincere wish of the editor that everyone connected with the trade, master, journeyman and apprentice, manu-

A MERRY CHRISTMAS TO ONE AND ALL. factorer, supply man and traveler, will enjoy a merry Christmas and the happiest—and busiest—of New

Years.

There is ample reason to suppose that the wish will be gratified. The year now drawing to a close has been a prosperous one. The manufacturer has been busy, the master has had his hands full, the journeyman has found no difficulty in obtaining employment the year around. Why then should not the day be full of enjoyment and satisfaction, for one and all?

The plumber has been charged with many shortcomings. He is alleged to be lazy and exacting. Some householders will tell you that for carelessness he takes the cake. He has to answer for many sins which should never have been charged against him. Still it has always been acknowledged that he knows how to have a good time when he discards his tools and takes a "day off." He is conceded joviality and the capacity of enjoying himself to the utmost. May he, then, exercise these worthy qualities through the yuletide season. Forget your troubles, banish from your mind the shortcomings of the Other Fellow in the trade, and spend the day in fitting spirit.

JUST A WORD about collections. Continual reiteration of the warning that strict attention must be paid to collections, may sound trite, perhaps even tiresome. The necessity is so grave at the present moment, however, that we feel impelled to devote

DO NOT DELAY COLLECTIONS. a little space to the matter. Collecting accounts after the Christmas season is a hard task, very often barren of results. People are "hard up" and their purses, depleted by the usual Christmas extravagances, have little to offer the collector. They are more inclined to "put off" paying and the merchant generally has to wait. It is the very opposite before the holiday. The purse strings of even the most penurious are loosed and money is spent with a freer hand than at any other time of year.

The inference is obvious. Get those accounts collected now. Do your collecting during the period of plenitude, instead of waiting for the inevitable lapse into the parsimony of the after season.

Most Complete Health By-law in the World

New Legislation Drafted in Montreal Will be Radical and Effective—Sanitary Conditions Will Have to be Improved—Steps Being Taken to Improve Conditions in St. John.

MONTREAL, December 5.—It is claimed that the new health by-law of the city of Montreal will be the most radical, complete and effective in the world. The first complete draft of the by-law has been submitted.

If it is passed, as it now stands, and its provisions enforced, Montreal will undergo such a transformation that ten years from now she will not be recognizable.

For three years it has been in preparation. Three drafts have been made, and after consideration, alterations of so considerable a nature, and so many improvements were made, that each was rejected.

A fourth was prepared by the special committee having the matter in charge, and which is made up of Controller Dr. Lachapelle, Dr. Louis Laberge, Ald. Dr. Roux, Ald. Dr. Garceau, and Ald. Letourneau, and the proofs of this have just been received.

This is the final draft. The committee will study it carefully because they do not want to submit it to the city council, and to the people, until it is perfect in every way. When they are sure that they can do no more, they will submit it to the city council for approval.

This will probably be difficult. Many of the changes proposed in the present housing system, and many of the laws laid down governing industrial establishments and schools are so strict, that there is bound to be prolonged discussion over many of the clauses.

To Ventilate Halls.

Every building for public meetings shall be provided with ventilation by thermic devices, or by mechanical devices capable of supplying 1,800 cubic feet of fresh air per hour and per person during the time such meetings are held. It is forbidden to introduce fresh air into any room of such a building at a speed of more than 200 feet per minute, by either of the aforesaid systems of ventilation, and at a temperature less than sixty-five degrees Fahrenheit.

It is forbidden to occupy any building or part thereof as a dwelling, when the same is unfit to be used as such by reason of its being so infected with disease as likely to cause sickness among the occupants, or because it has become dangerous to health, on account of its filthy condition, its dampness, its want of repair, or its defect in ventilation, plumbing, heating, or drainage, or by reason of its being infected with vermin or insects.

New Laws for School.

After the passing of this by-law, plans for the construction, alteration or repair of educational establishments, must be filed with the hygiene and statistics department. The windows of class and study rooms, dormitories and infirmaries shall be so arranged that the rays of the sun may penetrate directly into the interior of the room. The glazed area of windows in each class and study room shall be equal to at least one fourth the area of the room. A proportion of one sixth shall be tolerated in the case of educational establishments existing at the time of the coming into force of this by-law. Practically the same rules for ventilation apply as in public buildings. The number of pupils to be admitted to a study or class-room shall be so limited that each of them and the teacher or master, shall have a minimum of 150 cubic feet of air, and the total area of the floor space shall be 15 square feet at least per head.

Compulsory Bathtubs.

In every industrial establishment where the employes are liable to be soiled by smoke, soot, dust, fats, etc., a hot or cold water service, as well as wash-stands and baths for the use of such employes, shall be installed in well lighted ventilated, and clean rooms.

These are only a few of the points covered by this very complete measure. Regulations as to plumbing and heating will be included, stringent regulations making it necessary that proper sanitary appliances be installed.

A MODEL SANITARY CITY.

St. John, N.B., Dec. 1.—Under the new regulations of the St. John Board of Health, which require all property owners in the city to install modern plumbing in their houses, St. John, it is declared, is rapidly becoming one of the most sanitary cities to be found anywhere, and with the benefit of the supply of water from Loch Lomond and a modern sanitary system should be able to earn a reputation as blessed among other cities in the world in the matter of good health.

The work of bringing the sanitary arrangements up to date has proceeded rapidly and during the last couple of years a great amount has been accomplished. In the year from November 1, 1909, to November 1, 1910, 335 old conveniences were removed and 753 patent closets were installed. In the following year 456 were installed. There are now practically none of the old arrangements in the city south of Union Street, and in all the rest of the city, except Carleton and a few blocks between Brussels Street and Courtenay Bay, the inspectors have finished their work and modern plumbing has been installed or the arrangements for its installation have been made.

There are a few exceptions in this district, some people having refused to obey the orders and action will be taken in the police court against them.

The inspectors are now at work in the Brussels Street district, and, when they get through there, their operations in Carleton will commence.

Ontario Society Seeking Legislation of Uniform Nature for Province

TORONTO, December 15.—An important meeting of the directors of the Ontario Society of Domestic Sanitary and Heating Engineers was held last night. It was announced that the constitution would be issued shortly in printed form and that the membership certificates would also be issued in the near future. A very handsome and appropriate certificate is being prepared.

The most important matter under consideration was a communication from Harry Mahoney, of Guelph, chairman of the Legislation Committee, to the effect that he was applying to the Ontario Legislature for the enactment of uniform legislation to govern the whole of On-

tario in sanitary matters. This matter will be taken up very vigorously by the directors, as the need for uniform legislation is sadly felt.

The directors discussed the matter of estimate sheets, and are firmly of the opinion that all members should obtain something of this kind.

Explained Charter.

At a recent meeting of the Toronto Association, Crown Attorney Greer attended, and explained in full the terms of the Ontario charter. The most important point made was that amendments could be made to the charter at the discretion of the members.

Reduce the Number of National Officers

Sub-committee of Executive Think Offices of Secretary and Treasurer Should be Merged—This Would Cause a Considerable Financial Saving.

Montreal, Dec. 13.—In a few days now the sub-executive of the Canadian Society of Sanitary and Heating Engineers will have completed their revision of the constitution. In due time, this, in its revised form, will be printed so that all members of the society will have an opportunity of voicing their opinion upon the alterations made. That much exception will be taken to the changes is not likely. Indeed the amendments are not to be many, though the recommendation will be made that the executive of the society be reduced by one.

Some of the Benefits.

At present there is a secretary and a treasurer, and though a good deal of work devolves upon both of these officials, it has been felt by the members of the sub-committee that the offices might well be made one. This would have some disadvantages, probably. But also there would be benefits.

Now the treasurer does not live in the same place as does the president, the secretary, and the provincial vice-president—the three members of the sub-executive. As a result any funds that have to be expended must first be secur-

ed from the treasurer. Were the secretary and treasurer one, on the other hand, there would be no need of such transactions—transactions which have sometimes brought difficulty, and which might prove a much greater handicap with a less competent and less enthusiastic official than the one who now fills the office.

Economy, too, has prompted the sub-executive in suggesting the abolition of one office. At present the society pays the expenses of the executive officers to all the conventions. Decrease the number of the executive members therefore, and it will be seen the expense of the conventions will be decreased.

Seems a Wise Suggestion.

This is a point well worth considering. There is no use incurring expenses which may be avoided. If, therefore, the work of the secretary and the treasurer can well be done by one man, it would seem an amalgamation of the two offices would be remarkably good business. That is what the sub-executive is suggesting any way. It will be for the members of the society to express their views upon this.

erected. W. A. Brown has two, one for the Vancouver block, being erected for Dominic Burns, and the other for Ald Rogers' seven-storey building at the corner of Granville and Pender streets. There is a good year's work at least in these.

Messrs. Barr & Anderson, perhaps, are best fitted to cope with the present situation of cut prices. They are well and firmly established, both of the partners understanding their business. In addition they are reputed interested in the pipe-making works located in the east end of the city. They are not price-cutters, and their continued prosperity is complete evidence.

Quite a number of spare journeymen plumbers are in the city just now. This is a great place for "floaters," those men who float from one city to another looking for the work when it is at its best. Some who have been here lately came out from Chicago by degrees, and even went to Prince Rupert to look at things, and last week a couple of them were here on their way back to Chicago, having heard that labor troubles there had subsided, and that there was plenty of work.

Municipal Undertakings.

Plans are to be prepared for a reservoir to cost \$85,000 at Halifax, N.S.

The Hamilton, Ont., Board of Control have recommended the submission of a by-law for \$650,000 for waterworks improvements and extensions, including \$120,000 for a new reservoir.

Specifications are being prepared for an extension of the pumping plant at Strathcona, Alta., to cost \$20,000.

Public Buildings.

A labor temple to cost \$45,000, is contemplated in Brantford.

A \$35,000 school is to be built at Burlington, Ont.

Wesley Methodist church, Edmonton, are planning a new edifice to cost \$24,000.

A children's shelter to cost \$20,000 is in contemplation in Hamilton.

A fire station is to be built in Montreal on St. Dominique, at a cost of \$40,000.

A public library is to be built at Moose Jaw at a cost of \$50,000.

Vancouver will build a new exhibition building at a cost of \$125,000.

Plans are being prepared for a \$100,000 theatre in Victoria, B.C.

General Buildings.

The Bank of Montreal will build at Merritt, B.C. The cost is estimated at \$50,000.

Fraser & Seablow are to build a business block at Calgary, Alta., to cost \$30,000.

A Budget of News From the Far West

Association in Vancouver to be Reorganized — Price Cutting Leads to Failure, and Supply Houses are Adopting New Scheme of Credits.

Vancouver, B.C., Dec. 2.—There is talk of reorganizing the Master Plumbers' Association. This has not been in effect for some months, and the result has been so disastrous that not only has much money been lost in useless competition but several plumbers have been forced out of business. It was stated by a plumber to-day to Plumber and Steamfitter that, if the wholesale supply houses were to insist upon payment immediately, several of the smaller firms would have to close. Credit has been large and contract prices have not had sufficient margin.

Price-cutting has been very prevalent. The whole object was to get the work, and in many cases it was done without a profit. There was only one result to this. Only recently a master, who had arrived not long ago, was forced to leave the city hurriedly. He owed one company \$1,900, and other wholesale firms a less amount, and had also wages

owing for at least a week. Another similar case was reported this week.

This condition has resulted in wholesale houses adopting a new rule for credit. When a man starts up in business now, it is insisted that he have at least \$500, \$400 of which has to be deposited in a bank to the credit of the company furnishing supplies. It is hoped by this means to make some provision for safety. In the case of the first named failure, he was a newcomer, young, talked big, and must have created quite a loss.

One of the big failures recently was that of a firm of contractors. They had several large buildings under construction, owned automobiles and looked all right. It is stated that they lost on contracts, which caused the trouble. None of the large plumbers' supply houses were caught in this.

Many large contracts for plumbing are in connection with the big blocks being



The Question Box



Subscribers are Urged to Send Questions to be Answered, or to Comment on Letters Published. Descriptions of Jobs Done or Shop Kinks are Also Invited.

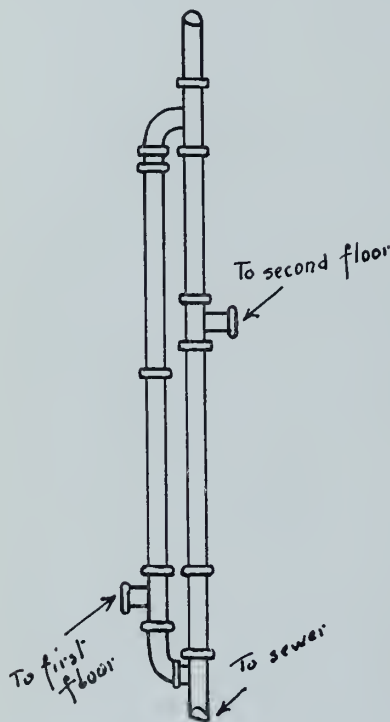
VENTING ON ONE STACK.

Editor Plumber and Steamfitter.—How may I vent two bath rooms that are on different floors and yet not have to run two separate stacks?

Toronto, Dec. 12

C.D.K.

In drawing No. 1 we give a method that we have observed employed. It will be seen that there is really but one stack, yet the effect is the same as



though two were used. This can be followed when the fixtures are not too far away from the stacks and will be found very convenient when the bath rooms are upon the opposite sides of a partition.—D.C.H.

SIZE OF TANK HEATER DESIRED.

Editor Plumber and Steamfitter.—In a flat building, that is occupied by twelve families, it is desired to put in a hot water storage tank. Can you give me any idea of the size that the tank should be?

Belleville, Dec. 8.

P. J. W.

Allowing that each family would use about 25 gallons of hot water per day it would seem that a tank of some 300 gallons would be necessary. We do not believe that this would be too large when it is taken into consideration that, with the number of families mentioned, some one would be using the laundry each week day. We are aware that smaller tanks have been used in flat buildings of this size, but it would be better to err on the side of a little too much capacity rather than to have the job skimmed.—D.C.H.

RANGE BOILERS OR STORAGE TANK?

Editor Plumber and Steamfitter.—In an apartment house of six flats that I have to estimate upon, it is left to the discretion of the bidder as to whether he shall estimate a separate range boiler for each flat; or one storage tank to be located in the basement. Which would you advise and which is more customary?

Brandon, Dec. 4.

Contractor.

In our opinion, if the party owning the flats is reasonably sure of their being occupied steadily there would be no hesitancy in advising the storage tank to be placed in the basement. While the cost of maintaining the heater for the tank would probably come on the owner, its maintainance would be trifling as compared with the satisfaction that it would give the tenants. To be able to have plenty of hot water at any period of the twenty-four hours would be a great advertisement for him. It is also safer and easier to maintain and more certain in its results if rightly installed. Others may differ with us but we stand for the storage tank in such a case as this.—D.C.H.

A COMPARISON.

Editor Plumber and Steamfitter.—Is there any way of figuring how large a water front should be to heat certain sizes of range boilers?

C. G. Devoe.

It is generally estimated that for every gallon of water in the range boiler some $2\frac{1}{2}$ square inches of surface are necessary on the water front. By figuring on this basis you can easily see why some jobs overheat, while others are merely lukewarm.—D.C.H.

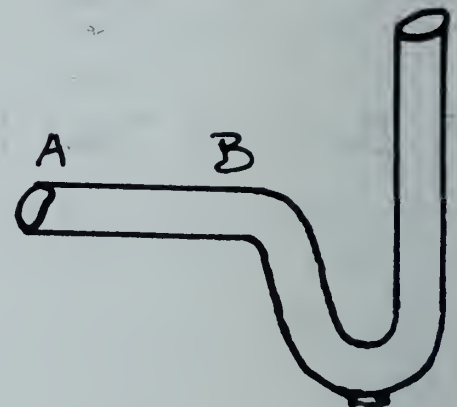
AT WHICH PLACE SHOULD TRAP BE VENTED?

Editor Plumber and Steamfitter.—In the drawing I have sent to you will you be kind enough to tell me at which place the vent pipe should be wiped into the trap, at point "A" or at "B"?

Winnipeg, Dec. 1.

A Reader.

We should prefer point "A" as it would give less chances for the accumu-



lations to lodge and also less chances for evaporation if it would be as convenient to locate the vent at that point.—D.C.H.

USE OF A CIRCULATING PIPE?

Editor Plumber and Steamfitter.—I have seen some remarks in your paper about using a circulating pipe on the plumbing water supply system. Now plumbing jobs have been put in for many years without this kind of thing, and why should it have to be used now as it is only another expense, and goodness only knows that we have to figure close enough as it is?

Kicker.

Grandfather used to ride to meetin' in a one horse, two-wheeled carriage too,

but he does not do so to-day as he makes use of the trolley, or more probably has his own auto.

It seems as though almost any one would remember that when the plumbing is put in after the old manner that there is a long line of cold water in the hot water pipe that must be drawn off before the hot water can arrive at the faucet. From twenty to seventy, and sometimes more feet long, the water thus wasted by making use of the old way of connecting up the range boiler amounts to some thing in the course of a year's time, if the family is large, or in the case of a building where there are several bath rooms in use. Therefore, any arrangement of the piping that will give almost immediate effects is of distinct advantage to the customer. We believe that if you would study to see how well you could put in the jobs, and as to the most convenient of the customer, instead of making such a kick on the expense of the job (or perhaps some of your own cutting) that you would get along a whole lot better and have a better line of patrons. People do not care, to-day, to pay for systems that are like what Dad used, and if you do not keep up to the times by seeing the best work, by reading about it also in your papers, it's a cinch that some more modern minded fellow will cop out the desirable jobs.—D.C.H.

WHY WATER SOMETIMES LOOKS "MILKY."

Editor Plumber and Steamfitter.—Will you tell me the reason that the water, sometimes, when it is drawn from the faucet looks as if it had milk in it?

Vancouver, Dec. 1. J. C. G.

It is found that water will absorb air. Under high pressure it will absorb more than under low pressure. When the pressure is removed the air in the water is free to escape. You will notice that when drawing the water it looks milky at first, but if allowed to stand for a time, it has no such appearance. The air is given off in small globules and it is the great number of these globules in the water that gives it its milky appearance.—D.C.H.

HOW TO KEEP THE LIME OUT.

Editor Plumber and Steamfitter.—Can you give me any information as to how the water front may be kept from getting stopped up with lime?

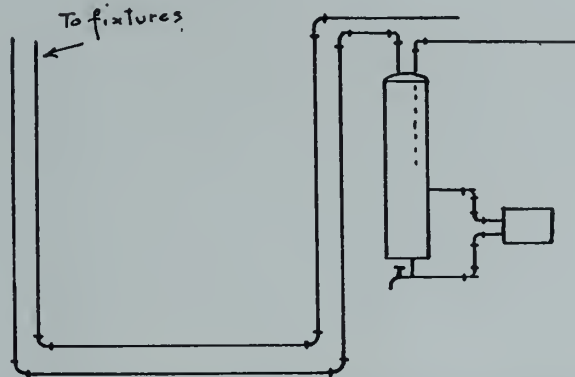
C. T. Rodgers.

There is an automatic apparatus which is connected so that all of the water passing between the water front and the range boiler must pass through this apparatus, within which there is a special-

ly composed brick containing certain matters which have the effect of preventing the limes depositing in the water front or any of the pipes between front and boiler. The bricks are inexpensive and can very easily be placed in the apparatus when it becomes necessary to use another brick.—D.C.H.

AIR LOCK ON SYSTEM.

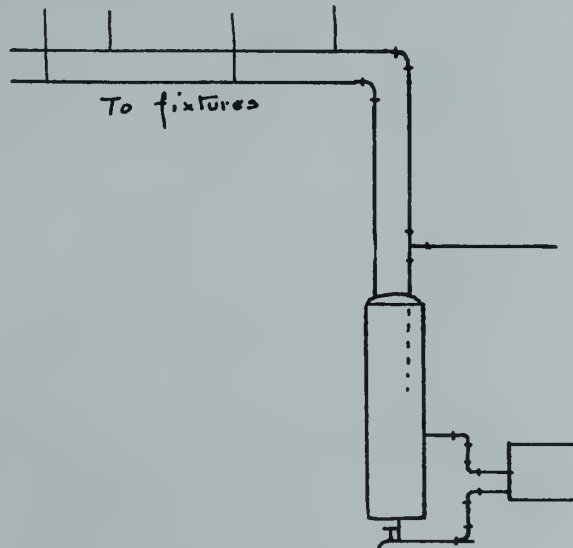
Editor Plumber and Steamfitter.—In the drawing we have sent to you, there seems to be a hold up at times on the flow of water. We wonder if you



can suggest any changes that could be made that would do away with the difficulty?

Montreal, Dec. 6. James Gates.

We believe that you have a case of an air lock which occurs at the point above the range boiler, and would suggest that you change the piping after the manner



shown in drawing No. 4, which should render it easy to get rid of the air which bothers you.—D.C.H.

SIDE RANGE BOILER CONNECTIONS.

Editor Plumber and Steamfitter.—Will you please tell me when it is undesirable to connect the flow pipe from the

water front into the side of the range boiler?

Montreal, Dec 9. George Weeks.

It has been found that when the water front and the range boiler are separated at quite a distance, that better results are to be obtained if the flow pipe from the water front is connected into the hot water pipe that rises from the top of the range boiler. This is sometimes also done when the front and boiler are near together in order to secure quicker results when a faucet is opened to draw hot water.—D.C.H.

lb

RUSTY WATER IN PLUMBING SYSTEM.

Editor Plumber and Steamfitter.—In a plumbing job that I have been called in to inspect, they are greatly troubled by rusty water although the job is a comparatively new one. Can you tell me what to do?

Edmonton, Dec. 2. J. J. J.

Probably it is soft water which sometimes has this effect on the cast iron water front. Give them a coil of brass and the trouble will disappear. Sometimes a coating can be formed on the water front by the use of some milk of lime, but we believe that the easiest and most positive way would be to make use of the coil as suggested.—D.C.H.

Exhibit At Fair Brought Splendid Results

Law and Kellow, of Leamington, Secured Fourteen Hundred-Dollar Order as Result of Exhibit Which Cost Twenty-five Dollars—A Good Form of Advertising.

THERE are various forms of advertising, all more or less neglected by members of the sanitary and heating trades. One of the most effective is the display of sanitary apparatus in suitable places and at opportune times. This phase of the question is a broad one, including in its scope everything from the proper arrangement of goods in show-room and window to the making of displays at fall fairs and exhibits.

It is surprising what good results will spring from an effective exhibit. Law & Kellow, an enterprising firm of Leamington, Ont., have found that "it pays to advertise" in this way. This fall they went to some trouble to arrange an exhibit of goods at the annual fall fair. Although it is only a three-days fair, they have made their exhibit an annual one.

This year, they put a metal ceiling over the exhibit and it helped to show the fixtures to better advantage as well as serving as an advertisement of the sheet metal end of the business. The total cost, including time and labor at the fair, was twenty-five dollars.

Splendid Results.

With reference to the results, A. E. Law says; "We find that it certainly pays, as all good advertising does. Last year I secured contracts from one man for nearly fourteen hundred dollars, just through being on the ground. Although we do not do as well as that every time, still we always do some. It is quite common for people to come in looking for someone to do their work and we thus get in touch with them at the fair."

Window Trim Made Sales.

But it is not necessary to wait for special occasions to achieve such results. The shop window can be made the medium for business getting every day in the week. A good display will go a long way toward deciding a customer to place his order.

A CONSTANT READER.

"I am myself a constant reader of Plumber and Steamfitter, and certainly think no plumber should be without it." Leamington, Dec. 5. A. E. Law.

An extension is to be built to the Hamilton, Ont., plant of the Steel Co., of Canada, to cost \$2,000,000. Tenders will be called shortly.



Exhibit of Law & Kellow—To the Left is A. E. Law, and to the Right, A. R. Kellow.

The Heating and Ventilation of Schools

A Paper Read Before Architectural Club, Containing Health Regulations in Force in Minnesota and Some Useful Hints.

A PAPER was presented recently before the Minneapolis Architectural Club on the ventilating and heating of school buildings by L. L. Roberts, of the Roberts Heating and Ventilating Co., of that city. Some of the most interesting excerpts are presented below,

the school room shall be 30 deg. F. or more.

148. In a gravity system of ventilation in connection with a furnace or steam plant, the flues for admitting fresh air to the room, as well as the vent flues, shall have a horizontal area

as near the ceiling as the mechanical construction of the building will allow.

155. No cloak room shall be less than 6 ft. wide, nor shall it have less than one window.

156.—The so-called "sanitary wardrobe," which allows the foul air of the room to pass through the clothing of the children before passing into the vent duct, shall be condemned as unsanitary.

Systems Now in Use.

The heating and ventilating of school buildings can be divided into seven general heads:

1. The district school—one room, without basement, using gravity system.
2. Schools—one, two, three and four rooms with basement, using gravity system.

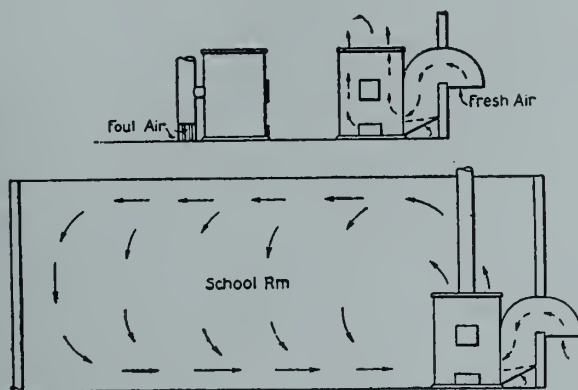


Fig. 1.—System for the district school.

including a few of the regulations placed by the State Board of Health on school ventilation. The illustrations are reproduced from "Metal Worker."

Minnesota Board of Health School Building Regulations.

146.—No school room or class room, except an assembly room, shall have a seating capacity that will provide less than 18 sq. ft. of floor space and 216 cu. ft. of air space per pupil, and no ceiling in buildings hereafter to be erected shall be less than 12 ft. from the floor.

147. A system of ventilation, in order

of not less than 1 sq. ft. for every nine persons that the room will accommodate

149. The flues for a plenum or a vacuum system of ventilation shall have a horizontal area of not less than 1 sq. ft. for every fifteen persons that the room will accommodate.

150. The window space shall equal one-fifths of the floor space of the school room.

151. In all rooms not exceeding 25 ft. in width all the light shall be admitted to the left of the pupils.

152.—In rooms exceeding 25 ft. in

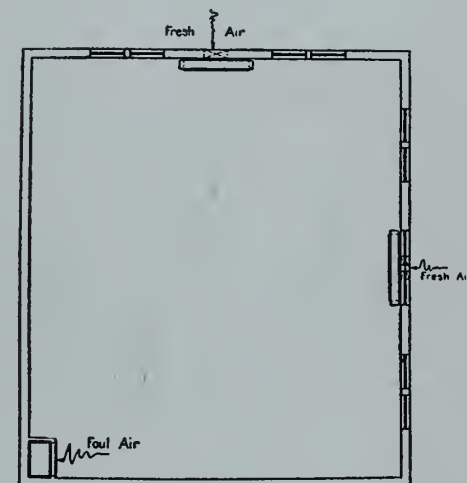


Fig. 3.—School heating with direct-in-direct radiation.

3. Schools—using steam or hot-water radiation with indirect or direct-indirect ventilation.

4. Schools—using direct radiation, with trunk line system of fan ventilation.

5. Schools—using furnace heat, with fan system of distribution.

6. Schools—using steam, with plenum or double duct fan system.

7. Schools—using furnace, with plenum or double duct fan system.

Each of the above systems is adaptable to humidifiers, heat control, and the mechanical systems with air washing devices, each commendable in its respective function and most desirable in connection therewith.

System for District School.

For the district school we use a special room furnace located directly in the school room, which draws its supply of

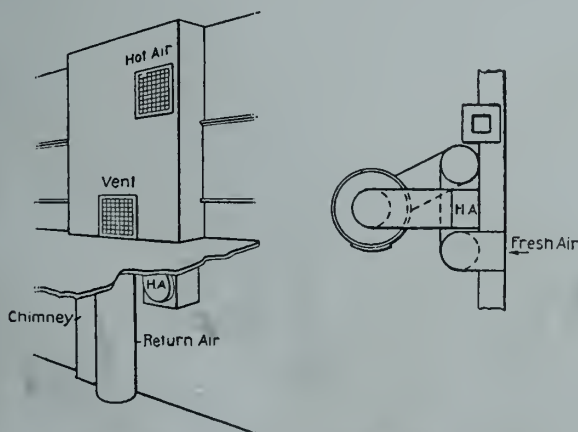


Fig. 2.—System for small schools.

to be approved by the Minnesota State Board of Health, shall furnish not less than 30 cu. ft. of air per minute for each person that the room will accommodate when the difference of the temperature between the outside air and the air in

width, light shall be admitted to the left and rear of the pupils.

153. Translucent instead of opaque shades shall be used in the windows for controlling the light.

154. The top of the windows shall be

fresh air through a fresh air duct and discharges it at the top of casing through the annular space between the furnace and casing, causing the warm fresh air to circulate within the school room. We have found that the temperature in the extreme corner of the room will not vary two degrees from the space within 6 or 7 ft. of the heater itself.

TOPICS OF THE TRADE

Some of the dangers which come from ignorance were illustrated in Montreal this week when a landlord rushed into the sales room of a furnace manufactory and complained of his boiler. "It will not heat the third floor of my apartment house," he declared. "There does not seem to be any water in the coils."

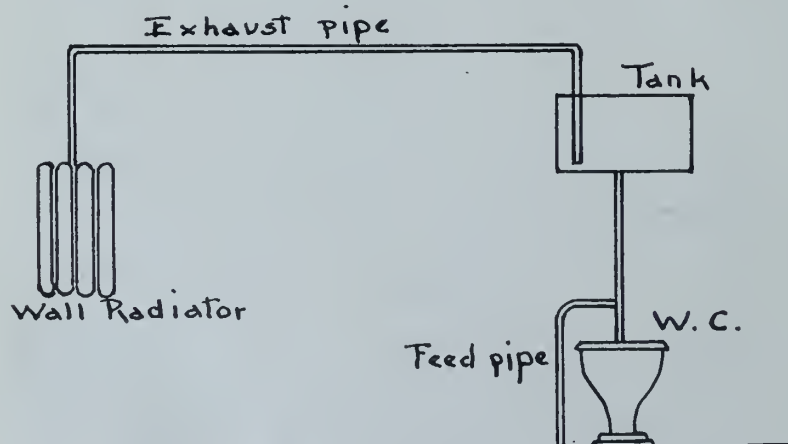
The man to whom complaint was made was an expert. He saw that there was something wrong, and by a few questions quickly found what this was.

It seems the heating system got its water from the pipe which supplies the water closet, and had an exhaust pipe into the top of the tank. The landlord wanted to make some slight repairs, and to do this turned off the water cock which permits the water to run down into the coils. Naturally the supply of water had become low.

"You go back," said the furnace expert, "and open that cock. If it hadn't been for the escape pipe you might have had a bad explosion."

"But how will I know when the cock is open?" asked the landlord.

Then the expert made a couple of rapid sketches which are worth reproducing here:



"That," said the expert, "is like your system is it not?"

"It is," replied the landlord.

"Well," said the expert, "when you turned off that cock no water could get

down to the boiler. What water there was in the coils commenced to evaporate. Steam formed. If it had not been for that escape pipe your furnace might have been badly damaged."

"Now," he continued, "I'll show you how to tell when the water cock is open."

Water Cock



Cross line

"That is the cock," proceeded the demonstrator. "See the line across it? When that is vertical the water supply is free. Turn it parallel with the ground and the water is cut off, and trouble is coming."

When the distressed landlord had left, to summon the assistance of a sanitary engineer to see that he had his heating system operating properly, the expert recited a number of similar mistakes which have spoiled the effectiveness of plants. "It all comes about through ignorance," he remarked. "Either the plumbers who install the heating systems do not explain them properly, or the people do not follow their instructions."

"A little time ago," he proceeded, "a man came in here and told us that the system we had supplied him with a year or two before was working badly. The top floor could not be heated."

"I looked the plant over and this is what I found."

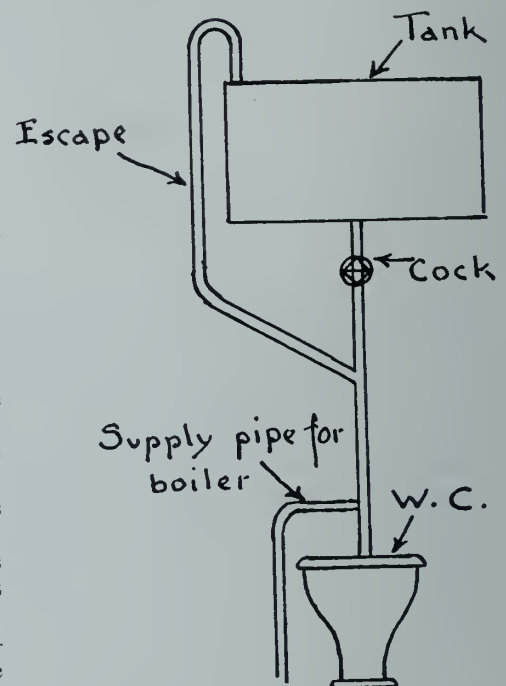
Again the expert had recourse to his pencil, so a similar rough cut had best be made here.

"The exhaust pipe," continued the furnace man, "which is supposed to provide an outlet for the water which has expanded with the heat until it is more than sufficient in volume to fill the coils here goes too deep into the tank. As

in his work, for the pipe running this far down into the tank, formed a syphon which drew off all the water from the coils on the upper floor. I had that pipe cut off within two or three inches of the top of the tank, and the upper coils filled immediately, and the flat became warm."

Another heating man tells of a call he had to Sherbrooke, to look over one of his furnaces which had proved a glutton for fuel. It had consumed 18 cords of wood and 16 tons of coal, and in the spring the owner thought it time to call a halt.

The expert could see nothing the matter with the furnace itself. So he determined to look at the chimney. Here he found the trouble. The room through



which the chimney ran had been crowded with old barrels. These had not been removed for a year or more. But they were moved now, and there behind them was discovered the trouble. A door in the chimney had been left open, and behind the barrels this had gone unnoticed for months.

Such are the troubles of the heating men. They declare it is up to those who install the plants to make such explanations as will render such mistakes less likely.

Arranging for Ball.

A. F. Passmore has been appointed chairman of a committee to arrange for a ball of the Domestic Sanitary and Heating Engineers of Toronto. It is intended to make it one of the best and largest events of the kind yet held in the Queen City. The date has not yet been definitely set but it will be toward the latter end of January or early in February.



POINTS ON HEATING

By

CHAS. H. DENISON



SOME POINTS ON THE BUSINESS END OF THE GAME.

Chapter 20.

While a great many of these articles have touched upon matters relating to what has been called "the practical part," meaning by that the manner of installing the work, the care of the shop and various other things that go to make up the labor part of jobs, I would like to ask if there is anything that could be considered more "practical" than the dollars and cents part of the game, and the way that they are to be "copped out?"

It seems to me that there are about a thousand things that all intertwine (so to speak) in this business of ours, and that you can't touch upon one but what you run into another. "Money is what makes the mare go," they used to say some years ago, and I would like to know what a man in this business can do, to-day, without money? Years ago he could start a shop without much cash and manage to plug along and, after awhile, get ahead enough to acquire a decent shop and business. At least that is what several thousand masters have done. Now how much better could they have done if they had had plenty of cash to start in on? Didn't they have to let many a good job slide just because they did not have the cash to swing it?

Therefore, it seems to me, that in spite of being in business to get ahead, these masters of ours do not give attention enough to the financial end of the game. They have not cut loose from shop ideas and uses. The proposition is impregnated with cellar basement ideas resulting in a most unsavory financial condition.

The Card Index.

I wouldn't state that a card index system would be the saving of any such business, for one might sit in the office the entire day and shuffle the lines off the face of the cards and no business come; but the system acquired by the afore mentioned "card index" would assist some. It would be one step which taken, with many others, would assist.

The newspapers (not the trade papers) have been "razzle-dazzling" the plumbers and fitters for many years. The surprising thing about this point is that

the newspapers all try to make out that the plumber is a sort of "Robin Hood" kind of a fellow, who has all manner of ill-gotten wealth at his disposal.

Now anyone who is acquainted with the trade and posted as to what the real facts of the case are, knows that master plumbers, taken on the average, are far from being rich, or even "comfortably well" off. Indeed, there are few lines of business where credit cuts a larger figure than this same plumbing and heating business of ours. The question naturally then arises, "if the shop keeps busy, say ten months in the year, and the master does business, why is so much credit necessary, and why is he not in a better financial condition?"

Work, Not Business.

One answer is that he don't do business. He does work! If you will think for a moment you will see that there is a vast difference between the two. It does not signify that because there are plenty of jobs on the books and the men are busy each day, that a business is being run. It may simply mean that "things is moovin'." Go into that very shop and ask the master right quick just where he stands, financially, and the chances are that not one in five can tell you with any degree of accuracy.

Such men cannot keep tabs on their dollars and cents to the degree that they can line up their men, and the office end of it simply gets their goat every time. I claim that there is greater need for practical horse sense in the business end of the game to-day than anywhere else. It is the vital point of the whole shooting match, and if misdirected the whole thing goes to smash.

What does it matter how much work is done, or how many men are employed, if same is done at a loss? If your yearly rake off does not equal a journeyman's wages, although you may be apparently running a business, you are not as well off as the common mechanic, and let me tell you that there are many master plumbers on this western continent who are in that very condition to-day.

Dollars Most Practical Part.

It seems to me, therefore, that instead of taking an ignorant pride in being called a "practical man," with the

understanding that it applies to the work only, the plumber had better wake up to the fact that the dollars and cents are about the most practical part of the whole dern business, and that the sooner he learns to manage them, "practically," the better off he will be. What in blazes is he in the game for anyway? For his health, only?

I say this because there are some who are so prejudiced that they believe the business end of the matter will fairly run itself. They believe that the working end is all that there is to it, and if a man puts on a white collar, posts up a bit and is up with the times, he is "one of them book taught fellars" attempting to put some new game over.

The game CAN be run for some time on only the working end of it, but what is the result? The jobs grow beautifully smaller and less in number as the man's credit declines, until, finally, he becomes nothing but a daily workman working on somebody's capital and paying all the profits (if there are any) to the firm that backs him.

Now this state of things has been developed times without number in different sections. It is not confined to any particular part of the country, and it comes, mostly, just because the plumber and fitter simply refuses to recognize the fact that installing the work and running a business are entirely different matters. Our plumbers are not progressive in comparison with other lines of business and inventions. What have we, in our craft, that will rank in importance with the phonograph, the telephone or the air ships of the day? If we had any inventions of equal importance do you suppose that you could get more than a very few of the rank and file to exploit same? I do not say that there has been no improvement, but I do believe that we have not improved to the degree that we should when we come to examine some other industrial lines, and same lines making money too at that because they have men connected with them that are hep to practically running a business. There is a large and juicy chance for all the time and study that you can put in on it to make the business end of the game a practical one as regards the dollars.

The Cost of Conducting a Plumbing Business

An Address Before Chicago Association—Hypothetical Case Used to Adduce Percentage to be Charged for Overhead Expense—"Expense Labor," a New Item, included.

A VERY capable address on the cost of conducting a business was given recently by E. T. Runge, at a meeting of the Chicago Master Plumbers' Association. He said, in part:

At the mention of the term "system" I can see you preparing to stifle a rather large yawn. However, my definition of system is simplicity and common sense and the avoidance of red tape. It will no doubt surprise you when I tell you that most of my work is throwing out cumbersome details in existing methods rather than adding to. Also, another surprising fact is that nineteen manufacturers out of twenty do not know the cost of their product, even though they are of a high grade of mentality and have given considerable thought of this subject. There exist any number of different methods in the endeavor to arrive at the same result; hence, endless confusion and red tape in trying to carry out mere theory.

The proposition must be approached in a practical manner, and I will state that there are only three elements in business, namely, material, labor, and expense. I will explain what constitutes these, and how to apply same in your estimating and figuring.

Take Material First.

We will first take material. This is what your customer gets. When you install a bathtub, the fittings, pipes, etc., and leave these with him, he gets what we call productive material. We will now take a hypothetical company, and their operations for, say, the month of January. The entire material purchased during this month amounted to \$1,167. They expended in payroll labor \$575. These two items are rather easy to keep, but not so the last and most important item, the one that causes over 90 out of every 100 persons who start in business to fail, namely, expense, all because it is misunderstood and overlooked. What constitutes this?

If you rent a building, you pay so much per month, and therefore know what your rent is. I will illustrate my point by taking an entire month's operation, and explain later why I do this.

The Overhead Expenses.

Probably once a year you pay your annual tax, amounting to, we will say, \$120.00, and during the year you will pay premiums on insurance, aggregating, say, \$60. It is immaterial whether this is paid at one time or in fifty installments—the fact is, you pay out the good, cold, hard cash. Therefore, we will take these yearly amounts and di-

vide them by 12 in order to obtain a monthly average, and our operations will run as follows:

Rent	\$30.00
Insurance	5.00
Taxes	10.00
Postage and telephone	10.00
Cartage	10.00
Depreciation of equipment	10.00
Miscellaneous	25.00
Expense labor	75.00

\$175.00

Owner's salary

75.00

\$250.00

The last item is probably puzzling you. If a man puts his money into a business, this money is entitled to natural return. If, in addition, he takes off his coat and also works, he is entitled to an additional compensation. If this were not true, would he not go to some other company where he could get a salary and allow his money to work for him? Also, if an owner should be sick or away from his business some length of time, he must necessarily hire someone to do the work that he does when he is there, and this \$75.00 is to cover the actual services rendered a business.

Expense Labor.

You will also note that I have charged \$75 for expense labor. This is made up of the labor that you pay for, but is idle, waiting work, running errands and the like. Therefore, we will deduct this \$75.00 from our \$575.00 of labor, which leaves us a net productive labor that actually works of \$500.00. These three divisions of the running of your business are all that I ask to keep.

As to the Material.

The material is easily kept, because the houses from which you buy do it for you by sending you invoices, and you simply have to add these up. Likewise you are obliged to make up a payroll to pay your labor, and this is also accessible. The only other thing necessary now is to make a record of the items of expense, and it is simply a detail whether you make these records on your cuffs, or in a book or by some other method, if you really put them some place, so that you will actually know what they amount to.

Having found that the expense is \$250, what shall we do with this in order to get it into your costs? The total of material and labor amounts to \$1,667, and this \$25 is 15 per cent. of same. Therefore, to every dollar of labor and material combined, that you estimate

on, there must be added 15 per cent. to cover this expense. As for example, we will say that we are estimating on a contract and the method of figuring same is as follows:

Material	\$100.00
Labor	40.00
Expense (15 per cent.)	21.00

Total

\$161.00

Now, if you get this \$161.00, you have your material and labor paid for, all your expenses paid for, and a living salary for yourself. Next, supposing you wish to make a profit on same and it will stand 20 per cent. or \$32.00, making the total of your bid \$193.00. This \$32.00 is yours, and you can put it in the bank.

Striking an Average.

But this is simply the operation for one month, and it will necessarily take from six to more months aggregate running in order to arrive at a practical percentage of expense, and the following tabulation covering a period of six months will illustrate my method.

January ...	1,167	500	250	15 p.c.
February ...	1,233	480	240	14 p.c.
March ...	1,000	300	230	18 p.c.
April ...	1,800	720	316	13 p.c.
May ...	1,000	400	240	17 p.c.
June ...	2,000	800	320	11 p.c.

Total ...

8,200 3,200 1,596 14 p.c.

I know of a case where a plumber figured on contract work and after a severe mental struggle put in his bid for \$500.00, and because he left out some material and underestimated the labor, it cost him \$500.00. He therefore lost \$50.00. This man was partially excusable because we all make mistakes, but Jones comes along and hearing that the bid was \$500, without stopping to do any figuring says he will do it for \$475, and later Smith comes along, and hearing that the latest low bid was \$475, says he will do it for \$450, and gets the contract, whereas, the first man loses \$50 because of making mistakes, the last man loses \$100 because he did nothing but guess, and there is no excuse for these last two; yet a great many contractors figure this way.

In conclusion, I simply wish to call your attention to the extreme simplicity of keeping three separate accounts of the money you pay out, and as a result you will not only be in a position to safely figure your costs, but also have a line on what you are doing and be able to make savings here and there.

THE heating estimate and record form, shown in the accompanying illustration, reproduced from Engineering Review, has been used for a number of years by J. P. Lisk, a heating and ventilating engineer of Brooklyn, N.Y. It has been used very successfully by others.

The work of calculation is greatly facilitated by having proper headings under which to place the data taken from the plans, or the measurements taken at the building. After the measuring work of plan or building is completed, the radiation, direct or indirect, flue, register, etc., is all carried out, a complete record of everything appertaining to the heating and ventilating of that room, also its location regarding exposure, is on file for present or future reference.

It would, to a great degree, do away with the guess work and carelessness so often associated with heating work. The average heating engineer sizes up a job at a glance. He has done buildings of the same size often before and knows fairly well what will be required. He estimates the amount of radiation to a large extent by guess work and the price almost entirely so. Very frequently his knowledge and experience enable him to "make good" with his rough and ready methods of figuring; sometimes, however, he falls down. The building is, perhaps, laid down on a peculiar plan, or it may be unusually exposed. Some

The estimate form shown, if closely followed, would preclude all possibility of failure or loss.

Owing to the rapid growth of the business of The Canada Metal Co., Ltd., Toronto, and the great demand for their goods in the West, it has been found absolutely necessary to build a factory in Winnipeg. Commodious premises have been purchased on Chambers street, and all the machinery is being installed under the personal supervision of W. G. Harris, jun. vice-president of the company. No expense has been spared to equip this factory with modern and up-to-date machinery and appliances.

Once The Canada Metal Co. make up their mind that a thing is necessary, no time is lost. To give an idea of the go-ahead methods of this most progressive Toronto firm, it is only necessary to state that though they did not get possession of the premises on Chambers street, until November, yet everything will be in full operation by the first of January.

[illegible]



Getting Ready for Dance.

The annual euchre and dance, of the Montreal Master Plumbers' Association, is to be held some time in January. The committee having the arrangements in hand will announce the exact date of this great event early next week.

New Builders' Exchange.

In St. John, New Brunswick, a Builders' Exchange has been established within the last few weeks. Charles F. Stevens has been appointed secretary.

Not a Silent, But a Still Laugh.

Through the unwitting assistance of a Montreal Master Plumber, some officers of the Inland Revenue Department were this week given some excitement, and some cause to experience that hang dog feeling which comes from being badly deceived.

It must be known that a "Moonshine Whiskey" plant was found in Westmount recently. Horrors, in Westmount! Naturally this caused some excitement, though inhabitants of the model city are keeping still about it—Someone simply had to make that merry quip.

Well the still has aroused the excise officers, and when a buyer of old metals telephoned that a man was trying to sell him one of the spiral apparatus used in the manufacture of whiskey, the officers rushed to the spot. Where had the man got this? The officers thought they were about to discover another still, and plied their questions briskly. For some time the dealer who had wanted to dispose of that spiral bit of metal led the officers of the government on. Then he told them the truth, how the metal had been secured from a St. Catherine Street plumber—it being of that pattern used in certain styles of hot water furnaces.

Poetry in Advertising.

H. A. Knox, of Ottawa, at times breaks into verse in his newspaper advertising. This is his latest effort:
Winter, Winter, Winter.

You're on your annual tour,
You're welcomed with a hearty shout
from both the rich and poor.
You have no terrors for a man within
whom manhood tells.
You give out with a generous hand
For labor you entail.

You keep us all so busy, in service, each
to all,

We're simply glad we're living,
And we're gladdest when you call,
A Cinch.

Is the soliloquy of 'Zero' when it meets
an unprotected pipe.

Purchases Business.

W. J. Birk, Beamsville, Ont., has purchased the plumbing, heating and tin-smithing business of E. Keith, of that place. He is also carrying a stock of hardware, stoves and tinware.

Plumber Scalded.

William Gillet, a Calgary plumber, was badly scalded while working on a boiler in the heating plant of the Windsor hotel. A plug he was fixing came out and the boiling water ran all over his face, hands and legs. The injuries proved serious.

A Neat Advertisement.

A. R. Wilson, Sherbrooke, has been running the accompanying neat advertisement.



has respect for the man of pipes and joints, and none are more interested in his work than the "small boy" of the house where he works.

We do not charge high prices, though we give you high grade work.

A. R. WILSON

Frontenac St., Sherbrooke.

tisement, with the best of results.

Partnership Dissolved.

Harry Laboritch and Louis Herman, tinsmiths of Winnipeg, have dissolved partnership. They have been doing business under the name of the American Sheet Metal Co. The former withdraws and Jake Zampher takes his place.

Delivered Address.

An open meeting of the Plumbers' Union was held at St. John, N.B., at which Organizer Bruce, of Toronto, delivered an interesting address on the benefits of trades unionism. Several local speakers addressed the meeting, which was largely attended and very enthusiastic.

News Briefs.

Mr. Rich, of Noble & Rich, London, was in Toronto last week.

Gordon R. Hoar, sanitary and heating engineer, of Calgary, and family are enjoying an extended visit with his parents, in Toronto.

Wm. D. Cowrie is building a frame tinshop at Saskatoon to cost \$2,150.

A. W. Law has gone into business on his own account at Aylmer, Ont.

Stevenson & Malcolm, Guelph, have been awarded the plumbing contract for the new factory of the Guelph Stove Co

Morrison Bros., Lindsay, have completed a heating and plumbing contract at the new Rockland, Bobcaygeon.

Must be Done Over.

Suspended sentence was ordered against a Victoria mercantile firm in the police court this morning on a charge of an infraction of the plumbing by-law. The accused firm had completed plumbing in their store premises with an unlicensed plumber. A charge was brought and the accused then had the work done over again. The magistrate held the cost would be punishment for the infraction and that the necessity of paying the lawyer for his appearance at court would be further punishment. Mr. Maclean assured the magistrate he would attend to his end of the punishment.

Now in Halifax.

Organizer Bruce is now in Halifax and will likely deliver an address there before the Halifax Plumbers' Union. Mr. Bruce has crossed Canada from the Pacific looking into organized labor through out the Dominion and addressing unions of the International, which he represents.

May Locate There.

A company manufacturing wrought iron and steel pipe has been negotiating in regard to location at Fort William.

News of the Manufacturers and Wholesalers

PORTABLE SIROCCO FAN.

Sirocco Electric Fan and Air Purifier is a device developed by the American Blower Company, Detroit, Mich., and Troy, N.Y., using a "Sirocco" (trade mark) standard, turbine type, impeller wheel but 3 in. in diameter as the basis for bringing the fan system of ventilation within the reach of everyone using electric current. The small space occupied and the light weight combine to make the "Sirocco" device portable and attractive.

On account of the high efficiency of the "Sirocco" fan, the electric motor is small (one-seventieth of a horse power) and the electric current requirement is almost insignificant. The complete outfit can be installed upon the window sill



by the office boy or stenographer, without tools.

"Sirocco" will supply 5,000 cu. ft. of fresh, filtered air every hour, diffusing same throughout the room or in any direction at will, or deflected through radiator for winter ventilation. By the simple reversal of a small lever without changing the position of the outfit or stopping same, "Sirocco" will exhaust from the room the dead "used-up" air in the same large volume.

TO LOCATE IN SARNIA.

It appears that Sarnia has landed the Mueller Mfg. Co. A good many places have been after the Canadian branch of this firm but Sarnia seems to have secured the inside track. A despatch from that place reads:

Representatives of the Mueller Mfg. Co., of Decatur, Ill., visited Sarnia again on Saturday with reference to locating here a large industry for the manufacture of brass goods and plumb-

ers' supplies. The firm had been visited at their New York offices two weeks previous by J. M. MacAdams, and later by a committee of Messrs. T. Doherty, Ald. McGibbon and J. M. MacAdams had met the directors at Decatur. The terms first asked by the company involved an amount of \$40,000 and some expensive municipal improvements, and the committee did not feel free to conclude a deal unless better terms were secured. A meeting was arranged for Sarnia, and after looking the town over, a meeting was held at the Vendome at which about thirty business men and members of the town council were present. Most of the afternoon was spent in the negotiations, the company agreeing to drop the clauses calling for extensions of pavement and

an 8 inch water main, etc., and finally also agreeing to a reduction of \$10,000 in the amount to be granted by the town.

Under the terms finally agreed upon, the company agrees to purchase its own site, erect buildings install machinery, etc., making a total immediate investment in Sarnia of \$100,000 and employ at the outset from 75 to 100 men, receiving from the town the sum of \$20,000 adequately secured in case the company ceases operations. The balance of \$10,000 is not payable unless the company is giving regular employment to at least 150 men. A fixed assessment for 20 years based on the price paid for the lands is agreed to, limited to the land used for the factory purposes.

New Plumbing Fields In Old Districts

Sherbrooke Dealers Report a Fine Year's Work in That Territory—J. S. Mitchell Has Installed a Number of Systems for Farmers—Jos. Codere Has Supplied Sanitary Equipments to a Number of Mining Camps, and to Several Villages.

Even the older parts of Canada present new fields to the plumber. This is one of the best features of the trade, one of the hopeful features. The scope is practically unlimited.

Talks with J. S. Mitchell and Jos. Codere of Sherbrooke, make it appear that the Province of Quebec may be counted upon to give large business to the plumbers. Both these men handle plumbing, and both report that they have sold more this year than for some seasons. Both also declare that the outlook for next season is bright.

Mistakes About the Farmer.

Mr. Mitchell has dealt especially with the farmers of the Eastern Townships. "There is a mistaken idea about the Quebec farmer," remarked Mr. Mitchell. "He is not behind the times. He is not poor. He is both progressive and up to date—a little slower moving perhaps than those who go to the far West, but much steadier—much more reliable. He is not afraid of the outcome of a season. He does not stake his all upon one crop. If frost comes at a certain season he yet has a good part of his income left. He practically underwrites his earnings by his system of growing several different products.

This is the class of man with whom Mr. Mitchell has done so much business. He states that they are coming to see that plumbing is possible on the farm. They are installing gravity systems,

with a tank at the top of the house, so sheltered that it will not freeze. From this the water for the bath and the w.c. comes.

Good Prospect for Spring.

"More are getting these bathrooms installed every year," declared Mr. Mitchell. "I expect to get a great deal of business from the farmers of the district next spring."

Mr. Codere has got a great part of his business from the mining camps, which abound in the Sherbrooke neighborhood. Time was when mining camps were pretty rough places. All that has changed. Now a number of them are installing waterworks. Several Mr. Codere has already supplied with plumbing fixtures, and he now has some contracts which promise a busy spring.

Old Towns Waking Up.

Nor are the camps all. Towns in the Eastern Townships have awakened to the fact that waterworks are possible, and that they need waterworks. Mr. Codere has watched these, and has already supplied sanitary equipment to several such places. He knows of more villages which are going to get waterworks in the spring, and is now after these for orders.

It appears there is yet a great deal of unworked territory for the plumber. He must have an eye open for opportunities, that is all.

PLUMBING AND HEATING MARKETS

MONTREAL.

Montreal, Dec. 14. — Just now the manufacturers and the jobbers are beginning to note a quieting in trade. Usually this comparative inactivity comes earlier in the year, but this season the demand has been so heavy that it was simply impossible to fill orders promptly. So shipments were kept up well into December. Indeed, some lines are still being ordered and sent out, but the call is not as constant as it was even a little time ago. The manufacturers are beginning to see the end. They are now allowing their thoughts to turn toward stocktaking. It has been a great year for the plumbing houses, but the lean days are now at hand.

Word comes from the Maritime Provinces that business there has been exceedingly brisk. Not until a day or two ago was any falling off noted. The same state of affairs is reported in Quebec. Still orders are coming in for enamelware, soil pipe, and lead pipe, while there has been little decrease in the volume of business as far as heating goods are concerned.

The spring-like weather of the past few days has not helped to make things brisker for the master plumbers. Those who are installing heating systems are all right, but the soft weather has done away with a good deal of the repair work. This will be needed later, however. The operations are just delayed, that is all.

Enamelware. — Naturally the demand has become less of late. Many of the large jobs are completed, but there is still some late work—enough, indeed, to cause good orders for baths, closets and sinks. For fancy enamelware, such as towel racks, looking glasses, cupboards, etc., many orders are being received. These lines sell well at this Christmas season.

Soil Pipe. — For this line there appears to be little possibility of securing a supply which will be more than sufficient to meet the demand. Still orders are coming in for this line of goods. There are drains aplenty to be completed it seems, and the manufacturers will have to keep their plants working at top speed for some time yet. As a matter of fact, there will be little half-time in plants this winter. The makers have seen the necessity of getting a large stock of soil pipe on hand.

Lead Pipe. — The condition of the pig lead market has become somewhat easier, and it may be expected that lead pipe will show a corresponding easing off. This is not evident yet, but the orders are smaller than they were, so the shortage which has existed for months is not being felt. There is little reserve supply, but enough to see the finish of the present season.

Iron Pipe and Fittings. — Here the lack of supply is still causing no inconsiderable amount of trouble. The demand for pipe has been greater than usual, and the supply less, owing to the inactivity in the mills caused by the excessive heat of the past summer. The growing demand is attributed partially to the growth of the country, and partially to the need of carrying water long distances. On some of the farms the supply of water was low, and this had to be piped from the wells to various parts of the farm.

At the mills it is now stated that the supply is becoming more adequate. The heavy demand from the west has ceased, and what is being turned out now can be sent to those in the east who need a further stock.

Solder. — A good many repairs are being made just now, and the demand for solder is therefore large. A new brand—which enables the repair of aluminum ware—has recently been put upon the market and is being tried by the trade.

TORONTO.

Toronto, Dec. 14.—It is reported that business continues brisk but there has been a natural falling off. The open weather has had some effect, enabling building operations to be continued on a more active scale than is usual at this time of year and consequently improving the scope of sanitary and heating work still to be done. The supply houses report that they are filling more orders than usual at this season and further that they anticipate the same activity to be maintained pretty well until the first of the year.

Enamelware.—When it is said that the supply houses have not yet caught up with all their orders for some lines of enamelware it will be seen that the demand cannot have fallen off to any appreciable extent in this department. Large orders are still being filled, particularly in the city. One order for a dozen bathtubs was placed the other day by a country plumber—a pretty good indication that the demand from the rural districts has been particularly good.

Boilers and Radiators.—The consensus of opinion among heating manufacturers is that, while a slight falling off has occurred, the demand is much better than is usually experienced in December. "We have still some little distance to go before we catch up with our orders," said one man. It is understood that the only fly in the ointment is the difficulty in getting supplies. Radiation has been hard to obtain all year and some trouble is still being experienced.

Soil Pipe.—The demand continues heavy and the complaint was heard in

one or two quarters that difficulty had been experienced in getting supplies. This, however, is not at all pronounced. Quotations on medium and heavy soil pipe are: 70 and 10. On the 7 and 8-inch sizes, the discount stands at 50 per cent.

Iron Pipe and Fittings.—The supply is now better, although in sizes, it would not require a very heavy run to clean out the supply house stocks. There is a first-class demand. Galvanized pipe, 1-inch size is quoted at \$6.02, and 1-inch black pipe at \$4.37. Other quotations remain the same as follows: Cast iron fittings, 65 to 70 per cent.; malleable fittings, 37½ to 40 per cent.; cast iron bushings, 70; malleable, 67½; ripples, 75 and 10; headers, 60 and 10, although some quote 67½ and 70; flanged unions, 70; malleable-lipped unions, 67½ per cent.

Lead Pipe.—No further advance has taken place in the quotations on lead pipe. In view of the lead situations, however, there is every reason to suppose that high prices will continue to prevail on pipe. Lead pipe sells at 7 cents a pound, and lead waste at 9 cents, with 25 per cent. off. Caulking is quoted at 4½ cents. The discount on traps and bends is 45 per cent.

Solder.—There is a good demand. Prices remain firm.

Metals.—The situation is uniformly satisfactory. No price changes have occurred to unsteady the market although there have been fluctuations on the primary markets and it is not improbable that the present quotations, in some metals at least, will not hold long.

A good volume of business has been done during the past week. The very perceptible improvement in the United States is reflected here in stimulated activity and confidence.

WHY DOESN'T RANGE BOILER HEAT?

Editor Plumber and Steamfitter.—I have a job that I know is put in all right and that the boiler is not too large for the water front. There are no traps and the circulation is all right, yet for some reason the water does not get hot enough. Can you give me any suggestion that will be of use?

Calgary, Dec. 8.

C. J. M.

We would suggest that you look to the kind of fuel that is being used in the stove. Perhaps the coal is too large and admits too much air so that the amount of heat in the fire box is not sufficient to do the work desired. Likewise the coal may be too fine, in which case it will pack down and not burn well in which case a proper amount of heat will not result for the heating of the water.

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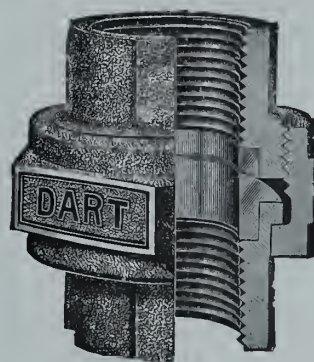
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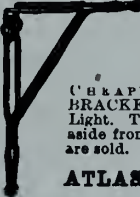
Plumber and Steamfitter receives, from time to time, enquiries for the names of manufacturers of various lines. These enquiries come from firms who usually intimate they have looked through Plumber and Steamfitter but cannot find any firm advertising the line in question. In many cases these firms are anxious to secure the information at once. This page enables manufacturers to keep constantly before the trade lines which it would not pay to advertise in larger space.

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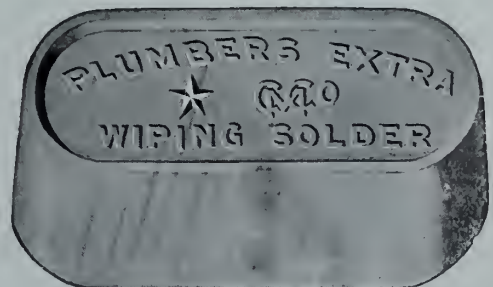
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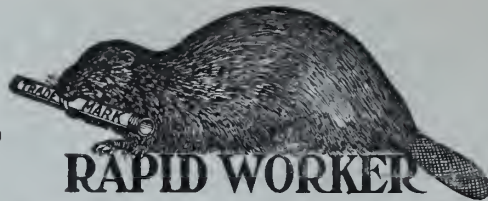
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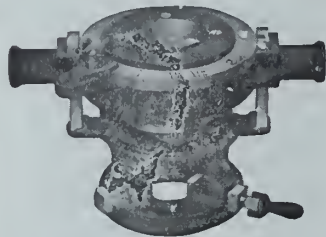


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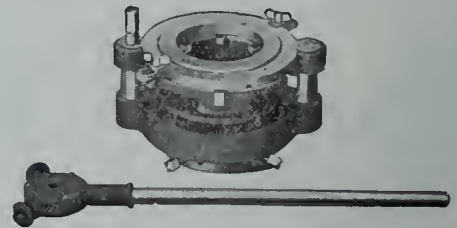
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A boy can operate it.



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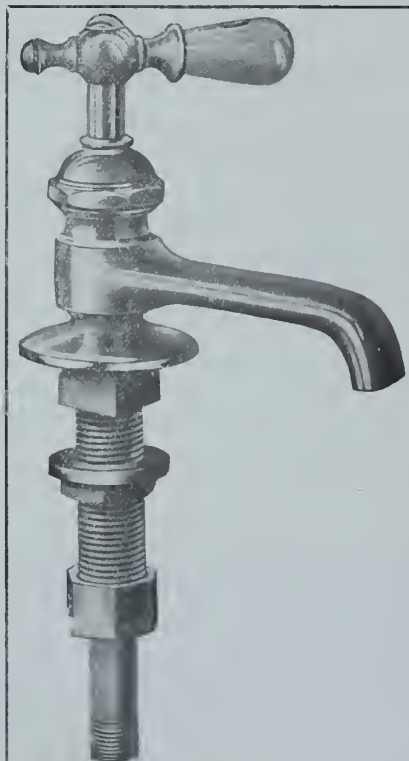


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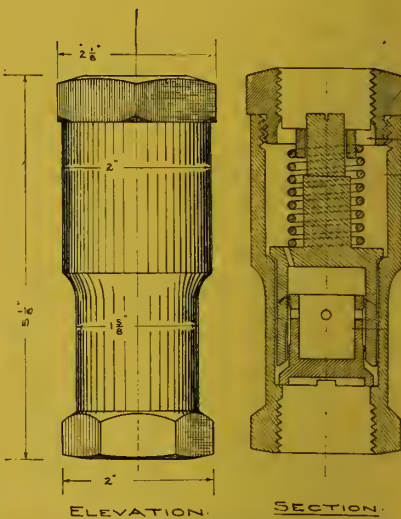
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